

AMERICAN JOURNAL OF INSANITY.

JANUARY, 1896.

SIMPLE ANGIOMA OF THE CEREBELLUM.

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Among the early contributions concerning brain angioma may be mentioned those of Schroeder van der Kolk* and of Virchow.* The first author attributes much importance to enlarged vessels or groups of vessels in the brain in the causation of epilepsy, while Virchow regarded the ectasie as harmless, probably congenital, and not unlike external naevi, because the size in some instances were so great that if the ectasie were of sudden origin there would have ensued more violent symptoms. These "naevi vasculosi of the brain" are spoken of as found oftenest in the floor of the fourth ventricle, where small veins and capillaries may enlarge to form single, or rosettes of, venous sacs that could be confounded with capillary apoplectic foci. The condition of the vessels consequently corresponded to that in the larger, blue-red, telangiectasia in the skin of the face.

Virchow and Kölliker† found a red, speckled area in the pons consisting of globular and spindle-shaped dilations of the capillaries and small veins which were thrown into spirals and presented numerous anastomoses, but there were no changes in the surrounding pontine tissue, the presence of the angioma appearing dangerous simply on account of the physiologic dignity of the organ in which it was found.

The following brief extract of the description of H. Morris' case of venous vascular tumor of the cerebrum‡ will show the apparent origin of the angioma in the pial vessels from which Klebs§ claims that all the cerebral blood tumors arise:

*Archiv. für path. Anat. u. kl. Med., Bd. III, 440, Bd. VI, 550.

†Loc. cit., Bd. III, 440.

‡H. Morris, Transactions Lond. Path. Society, Vol. XXII, 1872, p. 23.

§Klebs, Allgemeine Morphologie, 1889, p. 655.

Man, aet. 38; irritable, excitable, intemperate; his family history showed drunkenness in the mother and in the mother's father. At the age of thirteen he was knocked down by a fire engine and soon afterward he had his first fit, which recurred during the last thirteen years of his life. At one time he was insane for some months. He died after having had a series of seizures, during which delirium, bronchitis, and pneumonia developed. After death there were found old tubercular areas in the apex of the right lung with pneumonia in left lower lobe. The arachnoid membrane was opaque and thickened, the pial vessels being congested and varicose. The left cerebral hemisphere, a little to the side of its posterior angle, was seen to be adherent to the parietal arachnoid, and a congeries of tortuous veins distended with dark blood bulged outward from the surface of the brain. These veins took very twisting courses, were closely matted with each other, and here and there some fine areolar tissue intervened between their walls, which were exceedingly thin, and in places dilated into sacculi as large as a small cherry. The whole formed a tumor in which was no brain substance, and which reached nearly to the lower surface of the cerebrum, and upward nearly to the convex surface. Projecting forward from this mass of veins into the brain substance between the posterior and descending cornua of the left lateral ventricle was a large ovoid cyst, formed by the distension of the side of one of the veins of the tumor. This was as large as half a walnut on section, and was filled with blood clot of varying ages—some quite recent, others of an ochre-yellow color, and deposited in strata like the clots in an aneurism. A curved probe could be passed from the posterior part of this cyst along an infundibuliform process into a vein. The tumor did not reach to the lateral ventricle and did not communicate with the choroid plexus. The brain matter surrounding its front and lateral portions had a yellow, softened appearance, but no evidence of actual softening having taken place was discovered microscopically.

Morris concludes that from our knowledge of these formations in other parts of the body it appears very probable that this telangiectasia existed at or soon after birth, and that it was increased by the causes which produced congestion of the other vessels of the brain and the pia mater.

Joseph* describes an example of a cavernous angioma of the fourth

*Zeitschrift für kl. Medicin, Bd. XVI, 1889.

ventricle which caused marked compression of the medulla and hydrocephalus. The patient was a man, 22 years old, who suffered from intermitting headache, vomiting, syncope, spells of unconsciousness followed by improvement, which soon gave way to exacerbation of the previous symptoms and the development of many additional ones. The duration of the disease was one year. The tumor was 45 mm. long, 1 cm. thick, and 20-30 cm. broad; it was firm, composed of wide caverns containing blood and separated from each other by walls of connective tissue.

D'Arcy Power* describes and figures an oval angioma of the internal surface of the pia covering the angular gyrus; after preservation in spirit the tumor measured an inch in length and three-quarters of an inch in diameter; the tumor consisted of a close plexus of vessels of an average diameter of an eighth of an inch.

These few and brief references to the cases recorded in the literature will suffice to demonstrate that capillary, cavernous, and simple venous angioma may occur, though only occasionally, in almost any part of the brain, and furthermore that the symptoms caused by the disturbance due to the tumor will, as one would expect, depend upon the location and, to a certain degree, the extent and variety of new growth present.

There does not seem to be any example of a typical arterial angioma in the brain described or referred to in the literature ordinarily at disposal, but Virchow† states that both venous and arterial ectasia in the spinal cord have been described by J. V. Lenhossek,‡ and it is not at all impossible that in some of the cerebral angiomas recorded there may have been new vessels with arterial walls.

As already referred to, Klebs§ regards the pure cerebral angioma as springing from the vessels in the pia, and he maintains that even those which occur in the interior of the brain substance have a connection somewhere with the membranes. Klebs observed a case in which a large, wedge-shaped angioma spread downward from the surface; it was made up of cavernous spaces with thin walls, and the endothelial cells had proliferated to form club-shaped masses, without any intercellular substance, and consequently easily detached. Curiously enough Klebs found, in the hemorrhagic

*Transactions London Path. Society, Vol. 39, 1889, p. 4.

†Loc. cit.

‡Beiträge zur path. Anat. des Rückenmark, aus der Oesten. Zeitschrift für prakt. Heilkunde, 1859, p. 60.

§Loc. cit.

infarcts in the lungs which were present, that the emboli were the same club-shaped aggregations of endothelial cells as were seen in the brain angioma; in other words, the masses of proliferated endothelial cells had become detached and caused pulmonary embolic infarcts, and in this demonstration of Klebs lies a possible explanation of the actual cause of the angiomatous metastasis referred to by Langhans.*

Angioma in the brain consequently occurs so seldom that the following instance thereof in the cerebellum merits description:

CASE.—The patient was a woman, 40 years old, admitted to the Cook County Hospital July 14, 1892, with a compound comminuted fracture of the right side of the skull, due to a blow with a hammer in the hands of her husband. There were extensive scalp wounds and great depression and comminution of the skull in the right parietal region, the hemorrhage being profuse. The fragments were elevated and removed, the hemorrhage arrested, and drainage instituted. The dura was lacerated and the brain contused underneath the fracture. Three days later there was noted a left hemiplegia, much headache, and irrigation of the wound brought away disorganized brain tissue and blood clots. Two days after this the patient became unconscious and remained in coma until death, the 25th of July, eleven days after the injury.

Nothing particular or specific could be learned in regard to her health before the assault by the husband, except that it was supposed to be good. The autopsy was made twenty-four hours after death.

Only such findings as may seem to have any bearing upon the condition in the cerebellum will be detailed. It may be mentioned, however, that there was found pulmonary edema; calcareous and slaty indurated areas in the apex of the right lung; calcareous and anthracotic bronchial glands; arterio-sclerosis in the commencement of the aorta, in the coronary and in the splenic arteries; small cystic ovaries.

There was a large, irregular wound in the right temporo-parietal region, filled with gauze; there was much extravasation of blood between the scalp and the calvaria; the opening in the skull was 3.5 cm. in diameter, its lower margin was 4 cm. above and 3 cm. in front of the external auditory meatus; this opening was filled with disintegrating brain substance, and on removing the gauze, which was crowded into the hernia, thick, purulent material exuded. Removal of the calvaria showed considerable hemorrhagic infiltra-

*Virchow's Archiv., 1879, Bd. 75, p. 273.

tion into the meshes of the pia over both the hemispheres, the dura and the pia being adherent about the hernia cerebri. There was considerable slightly turbid cerebro-spinal fluid. There was an extensive area of softening and disintegration in the brain below the fracture extending over the larger part of the motor convolutions reaching nearly to the superior longitudinal fissure. The under surfaces of the frontal lobes contained areas of contusion; in the roof of the right orbit there was an area of splintering in the bone and in the frontal lobe above this was a mass of softly clotted blood weighing 31 grams. Otherwise the brain mantle presented a macroscopically normal appearance, the ventricles containing a quantity of clear, limpid fluid. The pons and the medulla were also quite healthy, but in the right cerebellar structures the following conditions were found: As the fourth ventricle was opened in the usual (Virchow's) method by means of a media incision through the vermes and the valve of Vieussens it was found that the lining over the right lateral half of its cavity presented four small, deep-red nodules which vary in diameter from two to four millimeters approximately; these masses occur upon the right lateral portion of the ventricular lining, two being side by side, the other two separate by themselves; they are all partly buried in the wall of the ventricle and consequently sessile; the surface is smooth, shining, and of a deep-red color. Otherwise the ependyma of the fourth ventricle was quite normal in its appearance (Fig. 1).

The cut surface of the vermes presents a few similar dark-red nodules, one or two of which are cut across, showing that they contain blood, which runs out upon the cerebellar surface; the cysts are situated in or upon the laminæ of the vermes, quite often at the junction of the gray with the white matter, sometimes at the bottom of a sulcus, sometimes at the summit of a lamina.

The external surface of the right cerebellar hemisphere also shows a few such elevations here and there, located in the gray matter, projecting externally underneath the pia, which is not thickened or changed in any way and not any more intimately adherent to the red, nodular masses than to the cerebellum in general (Fig. 1).

On exposing the interior of the cerebellar hemispheres by means of a number of vertical incisions it is found that cystic masses are present in the substance of the right half. The blood containing cysts are variously located with reference to the gray and the white matter, and they are found in the corpus dentatum as well as in the laminæ. In the central white matter of the hemisphere are a few

quite large cavities, irregular in outline, and subdivided into thin-walled compartments of varying sizes. It is not difficult to recognize larger blood vessels in this part of the cerebellum than one is accustomed to meet with. With the hand-lens numerous small cavities are detected that were not visible to the naked eye.

There are no hemorrhagic extravasations, no foci of softening, and no cysts containing other fluid than blood found in the cerebellum. The tissues were hardened in Mueller's fluid; a number of staining solutions were employed.

In describing the microscopic appearances the surface nodules will be considered first and then the structures located in the deeper portions of the right half of the cerebellum.

It was noticed during the preparation that the originally smooth surface of the peripherally located masses soon became rough and finely granular. In the sections the nodules are found to be built up of a number of closely aggregated, blood-containing spaces. In shape these spaces are, as a rule, irregularly oval, sometimes triangular, occasionally quadrilateral. The largest of the spaces are readily visible to the naked eye, while the smallest are not any larger than an ordinary capillary on cross section, so that the difference in the size of the largest and the smallest is very marked.

The wall of the cavities consists of connective tissue, arranged in quite dense, circular bundles, in which are small spindle-shaped nuclei; occasionally the bundles split up into a number of wavy, loose aggregations of fibrous tissue, between which pass interlacing strands; in some places the adjacent spaces are separated by what might be called a single wall thickness; in other places there may be meshes of loosely arranged connective tissue between the walls of neighboring cavities. The thickness of the connective tissue walls varies much in various parts of the same nodular mass as well as in the same wall of the single space; there does not seem to be any special relation between the size of the angiomatous space and the wall thickness, but it appears that the more superficial the space the thicker the wall; spaces in immediate contact with cerebellar tissue have, as a rule, the thinnest walls. As already stated, the pia is not adherent to and not thickened over the superficial angiomata. A quantity of extremely loosely meshed connective tissue without any typical arrangement whatsoever intervenes between the pia and the angiomata. There are no unusually large blood vessels to be traced from the pia, either to the blood angiomata or to the cerebellar tissue in general. As regards the lining of the compartments



FIG. 1. Simple angioma of the cerebellum, showing the angiomatous masses in the interior of the fourth ventricle and upon the surface of the right cerebellar hemisphere.



FIG. 2. Angiomatous mass, replacing almost a whole tertiary lamina, and causing pressure atrophy of the gray matter of the adjacent lamina to the right. In the interior of one of the spaces is a free, club shaped homogeneous mass. The spaces are filled with blood. Photo-micrograph, X 85.



FIG. 3. Round, angiomatous space, completely interrupting nuclear layer of the lamina upon which it develops, and partly the gray and the central white matter as well; thin stratum of the nuclear layer extends around the space on the side corresponding to the nearest sulcus. Photo-micrograph, X 85.



FIG. 4. Large venous channel running in the central white matter of the lamina, cut longitudinally, with pesiform dilatation. Photo-micrograph, X 85.

it may be said that any endothelial cell structure can not be made out, the inner aspect of the fibrous wall being perfectly smooth (Fig. 2).

The appearances in the interior of the cerebellum may be briefly described as follows: There are found a large number of single, thin-walled, blood-containing spaces of the most varying size and shape; some are very minute, irregularly circular or oval in outline; others appear like vessels cut longitudinally, and in some instances these extensive compartments can be followed through several fields in the microscope with extremely low powers, being usually found to run in the central white matter of the laminae and frequently presenting saccular as well as fusiform dilatations (Fig. 4). These single angiomatous areas are met with very freely in nearly all the sections, and they occur quite indiscriminately without any reference to any particular locality or tract.

Then there are also found large and small clusters of spaces without much cerebellar tissue between the single chambers, which often are in such close apposition as to be separated by but one wall, or there may be a quantity of loosely-meshed connective tissue arranged around each space; there are also very occasional instances of clusters of angiomatous caverns between which there stretches a small quantity of more or less sclerotic tissue. The size and the shape of the individual chambers in these aggregations, which are principally located in the interior of the cerebellum, vary very much. In one district adjacent to such a nodule the cerebellar tissue was perforated, as it were, a number of times, the small openings containing here and there a few red corpuscles, but the majority being empty; in most instances a delicate lining could be demonstrated.

The structure of the walls surrounding the spaces in the interior of the cerebellum in no way differs from that of the peripheral nodules; they are made up of a quite densely packed connective tissue, their thickness being variable; there was no endothelial lining demonstrable. A few nuclei are scattered through the wall structures as well as in the loosely arranged, extra vascular connective tissue, but there was not found any areas of small cell infiltration. In the irregularly arranged network of fibrous tissue about the superficial nodules, as well as projecting into the interior of the centrally located spaces from the wall, are occasionally more or less homogeneous, usually oval or oblong masses or areas of supposed hyaline degeneration; in some places the pedicle which attaches the

mass to the internal aspect of the wall is very thin, and in Fig. 2 is shown such a mass lying free in the interior of a large angiomatous space and not unlike the corpora amylacea in the prostate gland as well as elsewhere. The hyaline nature of these homogeneous masses was sufficiently well demonstrated by means of the Van Gieson staining method with hæmatoxylin and the acid-fuchsin-picric-acid mixture in which they assume the intense red color which has been found to be characteristic of hyalin by Ernst,* v. Kahlden,* and others. Presumably the masses, free as well as polypoid, originate from hyaline changes in the connective tissue composing the walls of the angiomatous spaces; or they may represent the changed endothelial lining. As already indicated all the spaces are filled with ordinary blood; in the specimens stained with eosin the red corpuscles are colored very nicely and the spaces are found very closely and fully packed, as a general rule.

One of the most interesting features in connection with the peripherally as well as centrally located angiomatous masses is their relation to the surrounding cerebellar tissue. The nodules are invariably imbedded in the substance to a very considerable degree, so that they replace almost completely that part of the surface in which they occur, as is readily observed from the annexed photo-micrographs. Thus, Fig. 2 shows an angiomatous mass which has replaced almost entirely the gray as well as the white matter of the tertiary lamina upon which it has developed; in fact, only a small portion of the gray and white matters remain to the left of the lamina referred to, and the gray matter of the adjacent lamina to the right has undergone considerable atrophy and thinning toward the bottom of the sulcus, as compared with the gray layer covering the other laminae visible in the section. This thinning is easiest explained as due to a pressure atrophy on account of the encroachment of the angiomatous mass.

And in Fig. 3 is shown a single, nearly perfectly round space, surrounded by a connected tissue wall and crowded with blood cells, which completely interrupts the nuclear layer of the lamina in question, and encroaches seriously upon the gray matter as well as upon the central white matter, portions of both of which it entirely replaces. In this particular section it is interesting to observe that a very thin stratum of the nuclear layer extends around the space on the side corresponding to the nearest sulcus.

Close study of the cerebellar tissue, immediately adjacent to the

*Centralbl. für path. Anat. und allg. Path., B. IV, No. 12.

angiomatous masses now under consideration, shows, in a general way, absolutely no special changes in the component parts; that is to say, the size and the shape of the cells differ in no perceptible particular from that of the cells in other parts of the cerebellum. There is no specially marked condensation or degeneration of the tissue in immediate apposition to the angiomatous spaces. There is absolutely no cerebellar sclerosis in any part of the sections treated according to the Van Giesen and other differentiating methods of staining. The angiomatous districts simply replace the cerebellar tissue proper without appearing to cause any special, degenerative, or other changes in the adjacent structures. To this last general statement there is perhaps this exception: When an angioma is located at the junction of the cortical gray matter with the nuclear layer, the multipolar ganglion cells of Purkinje are absent, or at least incapable of demonstration, for some little distance on each side, whereas the tissue otherwise appears quite unchanged; then again, when an area of blood-vascular spaces is located, either in the cortical gray matter or in the nuclear layer, but without encroaching upon the ganglion cells, these will be absent for a little distance, even though there is cerebellar tissue interposed between the usual location of the ganglion cells and the wall of the angioma. The multipolar ganglion cells are consequently absent for some little distance away from the angiomata, which otherwise simply replace the tissue of the cerebellum without causing other changes. There are no microscopic foci of softening or hemorrhage.

COMMENTS: From the gross and microscopic appearances in the cerebellum here described it is evident that it concerns a so-called simple or telangiectatic angiomatous condition in the right cerebellar hemisphere, which contains abnormally numerous and abnormally large and irregularly formed veins and capillaries.

The venous rosettes in the floor of the fourth ventricle (Fig. 1) and the spindle-shaped, oval, and saccular dilatations upon the abnormally large intra-cerebellar vascular channels reproduce, to a great extent, the structure of all simple angiomata, no matter where they occur, whether in the skin, in the subcutaneous tissue, in the mammary gland, in the bones, or in such important organs as the brain or the spinal cord. It is peculiar, however, that the telangiectasis in this specimen involves apparently all the vessels in the part of the cerebellum affected, except the arteries, so that instead of a mere local angiomatous mass there is present rather a general vascular overgrowth throughout the entire right

half of the cerebellum; and it is especially interesting to note that in the main the angiomatous sacs and channels simply replace the tissue of the cerebellum without any marked or constant secondary changes in the adjacent structure. This arrangement points strongly to the congenital or very early development of the angioma, because the relation between the vascular formations and the cerebellum is one of mutual tolerance without any protest in the shape of sclerotic and other secondary changes, and such a condition could not easily be imagined to exist, in case the process had been initiated suddenly or at a comparatively brief time before death. It is therefore possible to state positively that the fatal injury to the skull and to the brain had nothing to do with the development of the angioma.

The clearly demonstrable thinning of the gray matter in the laminae immediately adjacent to superficial masses of blood spaces (Fig. 2) is manifestly the result of a gradual pressure-atrophy.

The absence of the cells of Purkinje for some little distance immediately about angiomatous sacs, found in or near the normal location of these cells, is more difficult to explain; it may be congenital; it may be traceable to the disturbing influence of irregular circulation in the venous spaces.

From the effects of this abnormal vascular arrangement in the cerebellum important inferences may be drawn as to the probable results in case certain districts in the brain, for instance, should become the seat of a similar process.

FRAGILITAS OSSIUM, ILLUSTRATED BY A CASE.*

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The term fragilitas ossium is applied to that condition of the bony system characterized by a lack of proper nutrition, which may render the bones abnormally brittle (properly called fragilitas), or spongy, soft, and flexible. The object of this paper, however, is not to discuss osseous trophoneurosis in its broadest sense, but particularly the fragility often found in the insane. It is an accepted fact that the bones of persons suffering from certain forms of nervous disorder are abnormally brittle. The pathology is probably as obscure as that of fragilitas in the sane. It is doubtless only an expression of altered nutritive processes. Many different views are entertained by different pathologists. Dr. Blanchard defines it as "a chronic state of osseous inanition."

Gross, in his system of surgery, says "it is the result of disease; in some being soft, in others brittle." The areolar tissue is injected and infiltrated with bloody matter, and the periosteum is thickened, spongy, and congested. Another author maintains that the condition is one of saturation of the osseous tissue with a certain oily matter. The pathological condition is probably similar in some instances to osteomalacia, viz., an increased vascularity of medullary tissue. The vessels become excessively engorged, and in consequence give way, causing extravasation of blood clots, which may be found disseminated through the medulla, intermixed with fat globules, and at times new cell elements, the exact import of which is not at present known or understood. That the true infiltration, such as commonly characterizes inflammation, be present, however, can not be asserted. We are taught that this engorgement is at first central in the medullary tissue, and filling its cells with a gelatinous material, moves centrifugally, extending to the outer portions of the cancelli, the cells of which are gradually dilated, and finally pass into the Haversian vessels of the compact structure.

Agnew tells us that "coincident with this vascular disturbance comes the work of decalcification, which, like the first, extends from within outwards, the products passing off partly by the kidneys, in

* Read at Denver.

the form of oxalate of lime, and forming, in some instances, renal vesical calculi."

By this process we see that the constituents which impart solidity to the structure, viz., the saline, are slowly but surely removed, and in consequence the bone becomes soft and flexible, because there is nothing left except the cartilage, and even this may in turn disintegrate and liquify. While the actual pathological condition may not be positively demonstrated, yet we are very certain that there is a condition of the bones that predisposes to fracture, and that this tendency is greatly exaggerated in the insane.

You have heard it stated, and by medical men, that insanity did not interfere with longevity. This position is so palpably false that it scarcely merits consideration. While occasionally an insane person reaches an advanced age, yet the average reduction in expectancy of life is from fifteen to twenty years.

By carefully prepared statistics, it has been proven that the average life of an insane person was about eight years. Now the average age of insane persons when admitted to our hospitals is about thirty-eight years.

According to the mortality tables of the insurance companies the expectation of life for the sane man at thirty-eight years is twenty-eight years, or a reduction for the insane man of twenty years.

In nearly all forms of mental diseases tending to chronicity, the temperature is below normal, showing the patient is not thoroughly nourished. Now it is but natural to suppose that the osseous structure suffers equally in this innutrition, and if so the tendency would undoubtedly be to fragility. Frequently has the attention of medical men been directed to the very important morbid changes of the osseous system which occur in the insane.

In some cases the bones are soft, yield readily to pressure and produce various deformities. In others the bones are fragile, so fragile indeed that they can be readily broken with the thumb and finger after death. Such cases are of course very liable to fracture during life.

Davey, in 1842, reported six spontaneous fractures of the long bones.

Dickson, Williams, and others have reported cases in which the ribs were found so brittle at the autopsy that fracture could be readily produced. At different times we have had reports from reliable medical men of the pathological brittleness, softness, or

boggyness of bones as presented at the autopsy. It has also been incontestibly proved that persons afflicted with general paralysis, or with other forms of intense cerebral diseases, may sustain severe and extensive osseous or other lesions without manifesting the slightest perception of pain or impairment of muscular activity.

Dr. Gray, while superintendent of Utica State Hospital, reported among the admissions for a single year, one case fractured clavicle, one of fractured ribs and sternum, and one of fracture of the arm, all acute mania. He adds that in all of them were these injuries produced without intentional violence, or, in other words, they were not attributable to mal-usage by attendants, but accident, or self-inflicted injury. In no case did the patient complain of pain or injury, the fact of the bone fracture existing at all being unsuspected by patients or friends till the medical examination was made by asylum physicians. Some of them were wild and boisterous and inclined to fight, moving their arms and body in every direction, and complaining of no pain.

James Howden reports an interesting case of mania, followed by hyperesthesia and osteomalacia. In this patient, who died at the age of forty-eight, it was found upon post-mortem that nearly all the bones of the skeleton were soft and brittle, the bones of the spine and pelvis cutting as easily as cheese.

After examining a great many cases investigators have concluded that "in chronic diseases of the central nervous system, especially in insanity, the ribs are apt to undergo very considerable morbid changes, which give rise to increased brittleness, and hence predispose the bones to fracture from slightest violence." The pathological condition may be a rarefying osteitis, a condensing osteitis (sclerosis), or it may be an osteomalacia.

Our pathology teaches us that the rarefying osteitis may result in suppuration, necrosis, or caries. It is characterized by the formation in the marrow spaces, or beneath the periosteum of new, very cellular and vascular tissues, under whose influence the substance of the bones is absorbed. Condensing osteitis consists in the new formation of bone in the walls of the marrow cavities. This may be primary, or secondary to rarefying osteitis. Osteomalacia consists in the softening of fully formed hard bone tissue by the removal of its organic salts. Its cause is not known. Microscopical examination shows that the decalcification occurs first in the periphery of the Haversian canals, and in the inner layer of the walls of the marrow spaces.

That there are peculiar changes in the osseous system consequent upon diseases of the brain and spinal cord is beyond question; that the pathological condition is obscure is equally certain. There may be trophic changes, due to a disturbance of the sympathetic system, or it may be more closely connected through the posterior column of the spinal cord.

A. B. (æt. forty years), admitted to Athens State Hospital, violent and raving. Sheriff stated that several times on the way to the hospital he had fought viciously, and, while they had overpowered him, yet no undue force had been used. Patient was very much excited, swinging his arms, *a la* Sullivan, and apparently had full and free use of all his physical powers. He complained of no pain, and the existence of fracture was unsuspected until the assistant physician made his usual examination of new cases. It was then ascertained that four ribs were fractured, and at different distances from manubrium sterni. This was on Friday. On Sunday morning following patient died, having had no attack of violence after admission to hospital. Autopsy revealed the fact that not only were the ribs fractured, but they were brittle as pipe-stems, and that one fractured end had lacerated the pleura and lung tissue to a very considerable degree. This patient at no time complained of pain, nor did there seem to be any interference with muscular action.

L. V., admitted to Toledo State Hospital July 12, 1890, suffering from delusional melancholia. No special features were manifest at the time of admission. He was placed in one of the cottages, and assigned to a bed in the dormitory where about twenty patients slept. Some time during the night of July 13th, becoming restless, he arose and for a time walked aimlessly about the room; finally stopping, he leaned over the bed of another patient, who being thus suddenly aroused from sleep, failed to note that the man was harmlessly gazing at him, and throwing off his covering, he placed his foot against the chest of Mr. V., and with considerable violence pushed him away from the bed, not so violently, however, as to throw him down. Mr. V. went back to his bed, and lay quietly down until morning, when he arose with the other patients, dressed himself, and walked without assistance or apparent effort to the congregate dining hall, probably an eighth of a mile distant. About the middle of the day he became very restless and noisy, and attacked the attendant, who being alone on the hall, had to use some force in subduing him. It was denied, however, that any

undue force had been applied. He neither kicked nor struck him, nor placed his knees upon his chest when on the floor. The supervisor was ordered to remove the patient to the building in which disturbed patients were treated, and immediately did so, Mr. V. resisting some, though not fighting. When upon the veranda leading to the disturbed ward he broke away and ran considerable distance before being overtaken. In his running he showed no evidence of soreness or illness. When overtaken he gave up and returned with but little struggling. Very soon after being placed in the ward, however, he complained of being sick, and a physician was notified and patient put to bed. Upon examination we discovered several fractures of the ribs, and ordered his immediate removal to the hospital. He sank rapidly, though complained of no pain. He died on the evening of July 17, 1890. Autopsy revealed a remarkable state of affairs.

Autopsy held upon the remains of L. V. July 18, 1890, 10.30 A. M., by hospital staff and coroner. Thirteen hours after death, rigor-mortis well marked. Inspection of body. Slight abrasions on left side of face, on neck, on each hip, right knee and left ankle. Slight bruise on left elbow, breast and sides discolored.

Upon opening chest, muscular tissue beneath skin was found to be congested. Upon right side the 3d, 4th, 5th, 6th, 7th, and 8th ribs were fractured, the 7th being broken in two places; first fracture about two inches from sternum, and second, one inch from first. Upon left side the 3d, 4th, 5th, 6th, 7th, and 10th ribs were found to be fractured. The 3d, 4th, 5th, and 7th ribs were fractured in two places, the second fracture in each instance being almost beneath the axilla.

The 6th rib was fractured in three places — first, about one inch from sternum; second, about four inches from sternum; and 3d, beneath axilla. The 10th rib was fractured at junction of hypochondrial cartilage. Sternum broken below juncture of 4th and 5th ribs, an exostosis projecting three-fourths of an inch under first rib, right side, two inches from sternum.

A clot in right lung in plural cavity. Heart, a chicken-fat clot in right ventricle, otherwise normal. Lungs, lower lobe of right lung wounded at edge beneath 5th rib. Left lung adherent to diaphragm at lower and posterior portions, showing former pleurisy. Pleural cavity filled with blood.

Calcareous deposits in bronchia. Hypostatic congestion. Stomach congested. Liver slightly enlarged. Kidneys, fatty deposits

and probably pus in pelvis of right kidney; fatty deposit in pelvis of left kidney. Bowels and mesentary infiltrated. Rectum filled with hardened faeces.

Nineteen fractures around the chest. The ribs upon removal proved as brittle as pipe-stems. The number and location of the various fractures could not possibly have occurred in healthy bone except by running the patient through a threshing machine.

The coroner decided, after taking all the obtainable evidence, that patient had not been abused, nor suffered from undue or unusual violence, but that the fractures were due to the obscure disease known as fragilitas ossium.

THE RELATIONS OF ALCOHOLIC INDULGENCE TO INSANITY.

BY H. M. BANNISTER, M. D., Chicago, Ill., and G. ALDER BLUMER, M. D., Utica, N. Y.

The influence of the excessive use of alcohol in the production of insanity is one of the certainties, and yet there is occasionally a question raised as to the relative importance of this causal factor. A few years ago a physician, since a superintendent of one of our large State asylums, wrote a paper to show that its effects were insignificant, and in one way or another there has been produced a considerable literature on this side of the question. Nevertheless it may be fairly assumed that alcoholic intemperance is generally admitted to be a very important, if indeed not actually the most important, cause of mental disorder. Those who would dispute it are comparatively insignificant in number among alienists, and there is not any preponderance of scientific authority against it.

There are, however, certain questions that arise in this connection that are not so readily disposed of. While it is admitted that alcoholic excesses tend to mental break-down, while acute and chronic alcoholism are disorders that are universally recognized as appertaining more or less to the specialty of psychiatric medicine, there is yet room for a wide difference of opinion as to the effect of the use of alcoholic drinks in what is called moderation. There is certainly enough excess to produce a very large percentage of insanity in our asylums, but data are too generally insufficient for us to be able to say with exactness the proportion of cases in which it has certainly been an etiological factor. These are by no means always what would be classed as cases of alcoholic insanity, as we are well aware, and often there may be nothing in the history as well as in the symptoms to point directly to any such origin. Intemperance is a disreputable fact and is likely to be concealed or denied, even when it may have been excessive. It is very possible that this tendency far overbalances the contrary one of making erroneous *post hoc, ergo propter hoc*, diagnoses of insanity from alcoholism on account of prior known habits when really other causes are to blame, in asylum statistics, and that our figures of mental diseases of alcoholic origin are much below, rather than above, the truth.

The questions, therefore, that arise as regards the influence of alcohol in the production of insanity may be stated as follows:

1. Does alcoholic excess produce insanity? This, as already stated, may be regarded as an indisputable fact.

2. In what proportion of cases is this factor to be admitted? This is one to which various answers have been made, as indicated. The majority of reliable authorities place the percentage of cases directly due to this cause at not less than 10 or 12 per cent; some recent writers have estimated it much higher, and consider the increase of insanity in modern times as very largely due to such excesses. This is the view held by Smith of Marbach in a paper read last November before the Southwestern German Society of Alienists, and Garnier of Paris, in a communication a year or two ago, claimed that insanity had increased 30 per cent in the last fifteen years in that metropolis, largely from this cause, and that alcoholic insanity, properly so-called, had increased in that period threefold. Those who have minimized the influence of intemperance to producing below 10 per cent are very few and include no recent high authorities. We may therefore safely assume that at least 10 per cent, and probably more, of the cases of insanity in most civilized countries are directly due to alcoholic excesses. If we include only males, the percentage will naturally be higher, as alcoholic insanity is comparatively infrequent in women, and if we admit it as an indirect cause, we must add a considerable proportion of all cases of insanity in both sexes as more or less influenced by this factor. The poverty and misery induced by intemperance, the impaired constitutions, the reckless exposures, the traumatism, etc., will all have to be considered. We might also add the defective organization inherited by the children of drunkards under this head to still further swell the percentage.

3. What constitutes excess in the use of alcohol, and what is the influence on the production of insanity, of what is considered its non-excessive usage? This is the most complicated question of all, and the one that is hardest to answer satisfactorily. The often quoted experimental investigations of Anstie, Parkes and Wollowicz, and of Dujardin Beaumetz, seem to show that, under normal conditions, between one and two ounces daily, or not much over the latter figure, of absolute alcohol is about what an average robust individual can stand, and that any amount above that is beyond the danger limit, or more than the system can dispose of with safety. This, however, only applies to perfectly healthy and normal individuals,

and does not cover all the possibilities of either tolerance or intolerance of alcohol. We know very well that for almost all time some individuals have been using intoxicants to a far greater extent than is above indicated, without any very apparent directly damaging effects upon themselves, so far as known. On the other hand, perhaps, a greater number will be seriously injured by even less than the minimum here given. Moreover, the not finding alcohol in the urine does not positively show that the system is innocuously disposing of all that is ingested; there may be more or less injury to the nervous system, even from a small amount. There is no class of agents that have their effects more modified by individual idiosyncrasy than stimulants, and of these alcohol probably takes the lead in this respect. The same dose will affect one man in his brain, another in his cord, and a third perhaps in neither. Steady drinking will cause often the most opposite effects, both physical and mental, according to the individual; with the same kind and quantity one man is jovial, florid, and red-nosed; another is pallid, taciturn, and surly; one man is incoördinate, with a comparatively clear head; another has his judgment and temper awry, without any apparent bodily symptoms whatever.

As regards small amounts of pure alcohol, the same holds true — there is no general universal standard of moderation. When we consider, however, that it is seldom taken pure, and that its physiological action is complicated by the other more or less active constituents in the usual beverages, to say nothing of the unknown adulterations, it will be seen that the question is a very complex one. According to Dujardin Beaumetz, bad brandy is more directly toxic than absolute alcohol, and that is the character undoubtedly of a large proportion of the drinks now commonly used by more or less habitual drinkers.

The chief action of alcohol, however, is that which it exerts upon the brain and nervous system, and it is for that that it is used as a beverage by mankind; whatever benefit it may be as a food, a retarder of tissue waste, or an assistant to digestion, is a very secondary matter, and is not usually regarded by the drinker except as a convenient excuse for the indulgence. It would not be unnatural to suppose that a normal brain has no need of alcohol, and that the effects of so active an agent on one inclined in any way to be abnormal might be deleterious, and that in the way it is commonly taken, with all its associated more or less active substances, some of which are even more potent for evil than itself, this would be

still more likely to be the case. There is, therefore, a reasonable doubt, at least, as to the safety to mental health of even small continued doses of alcoholic drinks, and the burden of proof lies on the side of those who would dispute this conclusion.

Practically there is no standard of moderation in the use of alcoholic drinks, and it is therefore impossible to use statistics to determine the effect of moderate drinking in the production of insanity. What would be moderation in one would be excess in many more, and the statements of habitual drinkers can not always be accepted as to their habits. The only way actual statistics could be obtained would be from the fullest and most carefully studied individual histories, covering not only the facts of the life of the patient himself, but also those of his ancestors for at least two or three generations. Charcot is credited with saying that, "every drop of the seminal fluid of a drunkard contains the germ of all the neuropathies." This being so we will have, in order to positively eliminate the agency, direct and remote, of alcohol, to search the pedigrees and family histories to find the neuropathic taint thus originating that may develop into insanity, possibly of the alcoholic type, possibly in any other form, in the descendant of the original transmitter. A habitual user of alcohol may, it may be possibly admitted, show no bad results in his own person and yet pass on a deteriorated nervous constitution to his offspring. The effects on the individual himself may be slow in developing, and may require a skilled medical diagnosis for their recognition as of alcoholic origin, however serious they may be. It would be of interest to know what proportions of cases of senile insanity and late organic dementia occur in abstainers and in those who have been accustomed to the occasional or habitual moderate use of alcoholic drinks, and in this line is perhaps the best hope of finding any value in statistics for answering this particular question. If moderate drinking has any effect in causing insanity, it might be naturally supposed that it would be late rather than early in its appearance.

It has been already mentioned that we have to consider not merely the alcohol but the other constituents of the ordinary beverages when taking account of the pathological effects of these latter. Pure alcohol is very little used as a beverage, and when so used, as by the Scandinavians in some parts of our country, it is nearly always to excess, and the effects are obvious and indisputable. In the ordinary spirituous liquors we have not only ethylic, but also the higher, more toxic alcohols in greater or less proportion, together

with various ethers and other substances, many of which are powerful neurotics, to say nothing of unknown adulterations that may be more or less harmful. These last, together with the ethers, etc., occur also in the various wines, especially the imported ones. In beer we have had of late years a number of new constituents, as there have been extensive changes in its manufacture. Malt liquor would seem to be a misnomer for some of the beer of to-day, as glucose is said to have largely superseded malt in some beers, and where the cereals are employed they are likely to be rice or corn (meal), etc., instead of the traditional barley. Whether these changes render the drink any worse as regards its action on the nervous system may perhaps be a question, but is one the consideration of which complicates the subject. The amount of the nervous depressant lupulin with the alcohol taken into the system is also worth bearing in mind in the consideration of the possible effects of beer, in favoring insanity. *A priori*, it would seem that it might have such action, but as yet actual satisfactory data are hard to obtain. That the moderate use of alcohol, generally in the form of beer, has a bad effect in actual existing mental disease is supported by the testimony of English (thirty out of fifty superintendents reporting), German (Kraepelin), and Swiss (Forel) alienists who have had experience with and without its usage.

The answer to the third question, therefore, is a complicated one. There is no exact standard of moderation in drink; the minimum quantity is injurious to some, while others are apparently unaffected injuriously by very large amounts. If we could put all moderate drinkers on a certain ration, really moderate and within the limit given by Parkes and others, of alcoholic drinks and keep them to it, and we could after a time ascertain their physical personal equations as to endurance of alcohol, some generalizations could be made from statistics. Where this has been done, as, for example, in the population of some asylums in Europe, the weight of evidence is rather against the absolute innocuousness of alcohol so used. The conditions there, however, are not those of the average population, and can not be accepted as applying directly to the question of the production of insanity by alcohol.

There may also be some little value to statistics of organic and senile insanities as occurring in known moderate drinkers and in abstainers.

The answer to the question is complicated by the uncertainties as to the exact toxic value of the drinks used; the other neurotic

constituents besides the alcohol they contain; by the effects of climate, age, individual idiosyncrasies, etc.; by the possibilities of the late developments from long continued dosing and those of hereditary transmission, and especially by the varying and often very liberal notions of drinkers as to what moderation is, and the tendency of even moderate drinking to lead to excess in individuals possessing any neurotic or hereditary taint.

A priori, it would seem probable that even the moderate use of powerful neurotic agencies would at least have no beneficial effect on a normally constituted brain, and that in one at all abnormal, when used simply as an indulgence and not under any scientific medical supervision, there might be serious chances of positive injury.

Our knowledge of the effects of alcohol in the production of insanity may, therefore, be summed up as follows:

1. Alcoholic excesses produce insanity.
2. They are directly the cause of at least 10 or 12 per cent, and probably of a somewhat larger percentage. Indirectly they are among the causal factors of a very large proportion of cases that can not be directly credited to alcohol.
3. Moderate drinking is a very indefinite term, and this fact alone makes it impossible to utilize satisfactorily any statistics as to its effect in producing mental disease. There is, however, no reason to believe that moderate indulgence in alcohol is specially conducive to mental health in the average individual, and there is, on the other hand, a certain amount of physiological *a priori* presumption to the contrary. For the victim of hereditary taint or the neurotic it is undoubtedly often disastrous in its effects in this direction.

A CASE OF PARETIC DEMENTIA OF LONG DURATION.

BY W. L. WORCESTER, A. M., M. D.,

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On the third of October, 1895, Jane M., a woman admitted to the hospital June 23, 1881, died with the symptoms of exhaustion from paretic dementia. At the time of her admission the diagnosis recorded was secondary dementia, but the symptoms then recorded seemed, to say the least, highly suspicious of the disease which became, to my mind, unequivocal. Assuming that the case was at that time of such a nature, its long duration would render it exceptional, but the records contained a statement that she had been, several years previously, an inmate of the Taunton (Mass.) Hospital, and a transcript of the records of her case while in that institution indicated that her mental disorder was of long standing at the time of her admission there.

The report of the case, furnished from the Taunton Hospital, is as follows:

"Jane M.; age, 40; nativity, Ireland; occupation, domestic; residence, Boston, Mass.; duration of insanity, many years; diagnosis, chronic mania. Admitted May 11, 1874. Discharged April 3, 1875."

Hospital History.—When admitted she suffered from delusions of poisoning, and was said to have haunted the Superior Court for years under the delusion that she had a suit there. She was fault-finding and prone to incite others against hospital authorities. She improved physically, but mentally remained about the same. On the above date she was removed to the Tewksbury Almshouse, by order of the State Board of Lunacy and Charity.

The facts furnished by the records of this hospital are as follows:

Admitted June 23, 1881; native of Ireland; aged 50; domestic; single; age at first attack, 42; diagnosis, dementia — secondary.

Physician's Certificate.—Arrested and brought to the Tombs by the police. No history obtained. Was a patient at the Taunton Hospital seven years since. Excitable, very talkative, and disconnected. She believes that she has been poisoned by a certain doctor, who would put her out of the way if he could, that he might not be found out; that she has recovered a large amount of money from him in a suit; that the British Government has given her \$15,000 to-day; that she has heard the above doctor and oth-

ers talking about her cell last night, and that she was to be married last night to a lawyer on Beacon Street, and that another lawyer gave \$2,000 to have her arrested, because he wanted to marry her himself.

Examination.—A little below medium height, thin in flesh, gray hair, bluish gray eyes, pupil of right eye small and immobile to light; left, much more dilated, immobile also.

Previous History.—Father, James, born in Ireland; mother, Mary (nee F.), born in Ireland. Is a Roman Catholic, has always been considered eccentric, and not ordinarily intelligent; education limited, temperate habits, cheerful and frank by nature. Eight years ago spent a year at Taunton.

It is believed by her friends that a disappointment in marrying first caused her alienation. First decided symptoms observed twelve years ago. Has had a delusion that she was about to marry some rich man. Has grown thin in flesh and more demented. Has always been harmless and very happy in disposition. Neat in habits.

Hospital Notes.—October 21, 1881.—Marked delusions of hearing. Listens at the ventilators and floor to people whom she thinks are talking to her. Says that her people are here. Is quiet, tractable, not untidy.

April 20, 1882.—Continues to hear devils. At times is quite noisy. Scolds incoherently and breaks glass.

November 8, 1884.—Walks the floor most of the time, listening in a mysterious way to voices which come from below. Is very much demented. Says she has five gifts in her eye and must walk all the time and be fed on bread and water. Is tidy in her habits. The pupil of the left eye is dilated and immobile and the lens appears to be cloudy.

From this time until the following date there are only brief notes to the effect that her condition is unchanged.

March 1, 1892.—Has not changed very much up to date, but has been growing more demented and senile. To-day was very stupid, somnolent, and weak.

December 7, 1892.—Has just had two well-marked epileptic convulsions. Has become untidy.

January, 1894.—Has had a few epileptic convulsions, at night usually, since last record. Much demented; untidy.

April 1, 1895.—Very demented and weak. Walks about the ward, but is so feeble that she often falls and hurts herself. Always good-natured; very untidy. No convulsions recorded lately.

April 21, 1895.—Had a convulsion two days ago and another last night. Has been in bed for three days, in a weak, confused way.

May 12, 1895.—Her pupils are unequal, left considerably dilated, and both immobile to light. Articulation very indistinct. Knee-jerks absent. Walk feeble. Stands without swaying, with eyes closed. Very much demented. The circulation is very feeble; extremities blue and cold.

From about this time on, she was confined to bed, gradually growing weaker and more demented, until her death, October 3, 1895. No necropsy was allowed.

Although it does not appear that the diagnosis of parietic dementia had been made by any of the physicians who had previously had charge of the patient, I had no hesitation from the time, in May, 1895, when my attention was first called to her, in pronouncing the case to be of that nature, and never saw any reason to doubt the correctness of my diagnosis, which seems to me to be fully borne out by the history of the case in this institution. Extravagant delusions, inequality and immobility of pupils, convulsive seizures, defective articulation, progressive dementia, and paresis — practically all of the classical symptoms of the disease — are shown to have been present, and there seems to be nothing to throw doubt upon the diagnosis except the uncommonly long duration of the case. It seems to me beyond reasonable doubt that the disease was developed at the time of the patient's admission here, in 1881 — over fourteen years before her death.

Are we to assume that the case was of this nature from the time, twelve years before her admission here, when symptoms of mental disturbance were first noticed? Such history as is given does not seem to favor this view, and I can see no reason for thinking it improbable that the subject of another psychosis may be as liable to develop the lesions and symptoms of general paresis as one of previously sound mind. The earlier observers of the disease — Esquirol, Georget, Delaye, and Calmeil — believed such to be the normal course of the disease, and this obsolete view is embalmed, so to speak, in the name still applied to it by most English writers — general paralysis of the insane. The belief that the paralytic symptoms were merely a complication of mania or melancholia rested, of course, on defective observation, but there seems to be no good reason to believe that a simple insanity would act as an infallible prophylactic against this, any more than against other forms of organic cerebral disease.

USES OF ELECTRICITY IN THE TREATMENT OF INSANITY.*

BY IRWIN H. NEFF, M. D.,

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Electricity in the treatment of insanity has not received the attention that it deserves. Any measure, whether it be palliative or curative, should have an important place in the therapeutic measures of a hospital for the insane. During the time electricity was being advanced as a therapeutical agent it was thought that insanity offered a rich field to demonstrate the efficiency of the electric current. It was accordingly used, found wanting, and discarded. Doubtless the disappointment in its effects was due to the ignorance of its properties and also of the methods of application. Since those days it has often been used sporadically in various ways with varying results.

Electricity, as we know, is not an empirical remedy. This is conceded by authorities. It is recognized, however, and has been repeatedly demonstrated, that the two forms of current have certain well-defined laws.

Arndt states as follows: "Every electric current, however excited, of whatever quality, is calculated to remove mental disorders, but not every current is capable of removing every mental derangement. On the contrary it may aggravate some forms and make them incurable."

Erb, in his statements, may appear too sanguine, but although his suggestions have been adversely criticised, his directions for treatment are based on scientific studies.

Electricity is a valuable agent for suggestive therapeutics, and doubtless some of its benefits are dependent on this property, but that it has an effect of its own can not be doubted.

In the psychoses electricity, as an agent for therapeutics, may be used with suggestion in connection with the treatment and without the use of such an agency.

Various modifications of the current are in use, but for all practical purposes the interrupted and continuous forms are alone essential. The determination for their individual use is founded on the

*Read before the "Association of Assistant Physicians of Hospitals for the Insane," "Michigan Asylum for Insane," Kalamazoo, Mich.

usual indications in general disease, remembering that as yet we have no certain rules for their selection. Central galvanization, galvanization of the head, general faradization, alone or with peripheral faradization, are the most important methods. These combined with the so-called electrical massage will be found to meet the usual demands.

In reference to the forms of insanity benefited and the contra-indications I will say only a few words.

It is of course in the primary insanities we expect it to act as a curative agent. Its remedial effect, however, may be obtained in many psychical disorders. My experience verifies the result of other investigators in this line, and I have, as far as possible, followed the methods suggested by them. As illustrating the benefit which may be obtained by appropriate treatment, I will give a few illustrations: Many of the vesanias, and especially those having a neurasthenic or hysterical basis, are accompanied by what are termed "cephalic sensations." In these cases galvanization of the head often produces speedy relief, and in many cases has a pronounced curative effect. Various muscular and visceral pains, also paresthesia, are, at times, benefited by some form of faradization, or, perhaps, central galvanization. Many female patients have definite points of spinal tenderness. An appropriate course of electricity is sometimes followed by a marked improvement. I mention these few symptoms merely to illustrate what a useful agent we have in the electrical current. I can not refrain, however, from mentioning one more property which is at times beneficial, viz., its tendency to promote sleep. It has been my custom for some time to have patients, after their treatment, resume a recumbent posture. It is surprising to find that some patients, who are habitually wakeful during the day or night, will secure a refreshing sleep. I might mention that this occurs without verbal suggestion. Whether it is due to natural exhaustion, or whether it is a quality of the current, I will not decide. Suffice to say that it is the opinion of all electro-therapists that electrical applications, and especially galvanization of the head, may induce sleep. You will find in all your cases that it will be an advantage to secure for your patients rest and quiet for a specified time after all your treatments.

Certain forms of insanity, especially those dependent on toxic agents or organic changes in the nervous system, are accompanied by a change in the electric excitability of nerve or muscle. In these cases electricity may be of considerable benefit in diagnosis.

Electricity as a suggestive agent may also prove a valuable method of treatment. I have in mind not a few cases where verbal suggestion has been employed with the application with a marked improvement in the mental condition of the patient, the improvement not being obtainable by ordinary suggestive measures.

The efficacy of any method of treatment is based on the systematic use of the medicant and a recognized method of procedure. A collection of the results will then enable us to make appropriate deductions. The use of electricity is governed by the same principles, viz., a systematic use of the agent and a recognized method of treatment. In all the recent works on psychiatry, you will find reference to electricity and measures recommended for its employment. I therefore think it useless for me to detail the various methods in use.

Every suitable case should be individually considered, the treatment carefully selected, and the method conscientiously pursued.

For the convenience of the physician and also as a means of reference and compilation, I should suggest a method of recording such as I now show you:

CHART FOR RECORDING ELECTRICAL TREATMENT.

Name.....J. B.
 Form of insanity.....Acute melancholia.
 Method of treatment.....Galvanization of head, 2-5 milliam.
 Interval between treatments..Every second day.
 Number of treatments.....Twenty.
 Result and remarks.....Recovery in three months.

Remembering that electricity is a powerful stimulating and sedative tonic, according to the form of current used and the manner of application, we can make the following statements:

1. Electricity is of benefit in many forms of insanity, and in the primary insanities may promote recovery.
2. Systematic use is demanded, and, dependent on the effect desired, a varying length of time should elapse between applications.
3. The choice of the current is governed by the ordinary rules for selection in electro-therapeutical work.
4. Electricity is valuable as a diagnostic agent in insanity, as indicating an intercurrent or complicating disease.

CONTRIBUTIONS TO GENERAL ETIOLOGY AND PATHOLOGY OF THE INSANE.

BY DR. ALES HRDLICKA.

- I. Etiological relation of tuberculosis to insanity.
- II. Disorders of smell in the insane.
- III. Reflexes in the insane.
- IV. Investigations as to color-blindness and some psychological phenomena in the insane.

I. ETIOLOGICAL RELATION OF TUBERCULOSIS TO INSANITY.

That tuberculosis bears *some* relation to insanity, and vice versa, has been recognized by all those who ever gave this subject attention; that the first disease could stand in any *etiological relation* to the second has been largely overlooked or but superficially considered. The physician of the insane saw his patients die three to five times as often from tuberculosis as the sane people, and generally concluded that disease of the mind predisposes its victims to the consumption, prepares them for it, without recognizing that such conditions are only too liable, as causes, to be reciprocal.

That it is only the *predisposition* that insanity in time induces, is self-evident from our knowledge of the real originators of tuberculosis, as well as from experience, which shows us that the mortality from it in the modern asylums can be reduced to and below the general outside average. In the Middletown State Hospital, where all the following investigations have been conducted, among 1,100 insane patients, there have been but three deaths from tuberculosis within the past year. During this time I have had the opportunity to become acquainted with every one of the deceased before the *exitus letalis*, and with the majority of them at the autopsy table later, so that an under-estimate of that cause is quite improbable. The year before (October, 1893, to October, 1894) tuberculosis of some sort as one of the causes of death is registered in seven; at present (August, 1895) there are no more, but four or five cases with consolidation, for the most part chronic, of the apices, with no one of the patients presenting any other signs of consumption. Such is the practical result obtained by favorable climatic conditions of the hospital and strict hygiene, and it is only natural for it to be such; nevertheless, I have no doubt whatever but that the

predisposition to phthisis exists among the inmates in this, as in any like institution, waiting only for the up to now here fortunately checked contagion. To the interpretation of this "predisposition" we will return somewhat later.

One of the first observers to point out to some relation between these two diseases was McKinnon, who, as early as 1845, stated his conviction that "the scrofulous and insane constitutions are nearly allied"; and that "lung phthisis appears especially to stand in close connection with insanity." Landsberg (*Mania und Lungensucht*, *Rust's Magazine*, No. 64) believed that "insanity is often a result of phthisical dyscrasia." Hagen (*Allg. Zeitschr. f. Psych.*, Vol. 7) expresses in his statistical data and article, that "insane are five times as subject to tuberculosis as sane," and also that in the tuberculous insanity it is five times as frequent as in the non-tuberculous. "Tuberculosis may be both a causative or modifying cause of insanity" (Skae, *Regis*, Van der Kolk, Ball); and in a similar sense speaks Morel in his *Psychiatrie* (1860).

Of contemporary authors it is Clouston who has given the greatest attention to the relations of phthisis with insanity, and he quotes, in his article on phthisical insanity in Tuke's *Dict. of Psych. Med.*, the following: "Perhaps two-thirds, or even more, of idiots and imbeciles are of scrofulous constitution" (Ireland: Idiocy and Imbecility).

Van der Kolk (*Mental Diseases*): "It is remarkable that in the very same family some of the children suffer from mania or melancholia, and the brothers and sisters, who have remained free from these diseases, die of phthisis."

Guislain (*Lecons orales sur les Phrenopathies*): "Pulmonary tuberculosis appears to me to be in direct relationship with insanity; it is frequently seen in the descendants of the insane and in their progenitors."

Dr. James quotes Thompson as showing that, as to heredity, the two diseases are similar in the following respects: "1. Transmission is from either parent. 2. The disease may appear in the child before it is developed in the parent. 3. The disease may be transmitted by the parent without development in himself. 4. Atavism is a frequent and important characteristic." To which Clouston adds: 5. "The age at which the two diseases are most commonly developed is somewhat the same." Clouston believes the greatest risk of insanity is where both phthisis and insanity existed in the same family, more so than when either was alone. In his *Text*

Book on Insanity this same author speaks thus: "It is surprising how often both diseases, phthisis and insanity, occur in different members of the same family. They are too frequent to be a mere coincidence. The constitutional weakness which tends to end in phthisis is, I have no doubt, akin in some degree, under some conditions, to that which tends to end in insanity."

All these propositions seem clear, absolute, and the etiological relation of tuberculosis to insanity would appear by them established. And still, strange to say, however positive and clear to the point the majority of these statements seem to be, and although the very words used seem to speak for it, yet the etiological bearing of tuberculosis on insanity is by no means universally recognized. Almost all the authors of these statements neglect their own words and turn them to proof of the only fact seemingly apparent: Insanity leading to phthisical dyscrasia and thus more or less directly to the large percentage of deaths of this disease in the asylums. Some of the first statements on this matter, as for instance that of Landsberg, were ventured so early in the days of psychiatry that they are but mere indications of the lucid future. But with the late observers it seems a kind of unexplainable oversight not to have given a fact apparently important and intuitively observed their more extended and thorough attention. Take, for example, Clouston. He will clear points of resemblance of the two diseases; he will recognize their mixed occurrence in the same families, and the consequently arising greater gravity of both disorders; he goes even farther and expresses directly his conviction of them being akin in some form and degree one to the other; and, as the only consequence, he tries to establish a new form of insanity, the one with which tuberculosis, the developed disease already, is directly associated—the phthisical insanity, so-called; he has no word for the phthisical dyscrasia. And similarly, all the others.*

At such a state of things it is undoubtedly necessary to look into the subject a little closer. The most direct way to determine a point of this kind is by statistical investigation; but, before we have recourse to any statistics, let us see clearly what is really disease of mind and what is consumption.

* Since this was written, two American papers, bearing to a certain extent on this question, appeared: one on "Phthisis and the Neurotic Element," by Dr. Mays, and the other on "Phthisis and Insanity," by Dr. H. C. Tomlinson, both referred to in *N. Y. Med. Journal*, No. 859.

Tuberculosis, taken abstractly, is both a cause and a result of a certain general or constitutional, but especially pulmonary, weakness, and this weakness, which may be transmitted from parents to the progeny and take distinct shades in different individuals, we call dyscrasia phthisica. What is really a dyscrasia? The cells of the normal system have the power acquired during evolution of resisting the more common harmful influences, a self-preservative power, or a power of resistance. This power is compound. And again, there is a general resistance, or that common to all the cells of the body, and there is the resistance of each individual group of cells or that of the various organs. Being an established function of all the cells, such a resistance must have its representation in the nervous centers, as all stable conditions or properties of the cells have, and these nervous areas must be, besides appreciative: (1) Active or reactive, and (2) related directly with other parts of the central nervous system; and, all other functions being related more or less with the entire central nervous system, this must by analogy be the same. These are not theories, for we can prove them by many examples. All changes of the function, its centers, or their connections, must necessarily correspond and be directly proportionate to each other. Perfect centers will keep up perfect resistance; imperfect resistance, if of sufficient duration, will affect correspondingly its centers, and these the nervous entity. A temporarily diminished resistance of an organ is, according to its kind, its respective weakness. Permanent diminution of some form of resistance of a group of cells is a corresponding form of dyscrasia. Dyscrasia, defined, is a permanent, inherited, or acquired defect of some form of natural resistance of one or more groups of cells of the human body. Phthisical dyscrasia is a loss of that form of resistance of the body, and especially of the lungs, which, when present, hinders a man from acquiring tuberculosis. Insanity is a result of various extensive disorders of the brain, an organ that at once is an organ of appreciation of all conditions of the body, and an organ that more or less directly controls every part of the body. Now let any constitutional weakness, tuberculous or other, become established through long-continued outward causes, and, before the specific disease of the dyscrasia sets in, what have you found, but that the brain, really the trophic, sustaining, reactive center, is weakened correspondingly? In other words, how will you explain "dyscrasia" but as resting on a nervous basis? Now, a nervous, a brain weakness

of any kind, any extent, is a disorder; insanity is due to a brain disorder, and how far have we from one to the other? Every dyscrasia is, in a strict sense, besides the condition of the nervous system in general, a mild form of mental alienation; and as such, can it be other than one of the predisposing causes of the graver general brain disorders, the graver forms of mental alienation—the insanities?

Thus, and thus only, wish I my words to be understood. I do not believe, with all the apparent facts I have, tuberculosis to be a cause of insanity, no more than I believe rheumatism or paludism to be such, but I will maintain, as the result of my investigation, that the results of tuberculosis in any of their forms—in other words tuberculous dyscrasia of any kind—is, just as any other dyscrasia, the gouty, syphilitic, rachitic, etc., one of the causes of disease of the mind, or insanity.

Looking through psychological literature, I find I am not entirely isolated in the substance of these opinions, a fact which gives me much confidence in their veracity. According to Ball, insanity is “not a malady that commences, but one that finishes.” (*Lec. sur les Mal. Ment.*, p. 34.) Speaking of the heredity of insanity, C. Mercier (*Tuke's Dict. of Psych. Med.*) says: “Much more important is the fact, far too insufficiently recognized, that the factor that is directly inherited is not insanity, but an instability or disordered arrangement of nervous tissue, which allows insanity to occur; and that we must look for the heritable antecedents of insanity not alone in insanity itself, as existing in progenitors, but in all maladies which display evidence of undue instability or disorder of the highest nervous arrangements.” And Krafft-Ebing (*Psychiatria*, '93, p. 170) says: “There is no doubt that all that weakens the nervous system and the propagative powers of a person leads to neuropathic constitution, and thereby to all possible nervous disorders of the progeny.” “A person does not inherit insanity, but a tendency or predisposition to it. The tendency is inherited from the stock, not merely from the immediate relations. A predisposition to insanity is not the heritage of something definite and known, passing from one generation to another in a definite and constant way, but rather of an uncertain bundle of obscure tendencies, which break up into various distributions.” (*Maudsley: Pathology of Mind*, '95.) And again Maudsley, in the same work and edition: “It is not the insane variation that is inherited, but a native fault or flaw in the germ-plasm of the stock.”

Thus supported, even though the citations were not written by their respective authors with the same points in view, I shall no more hesitate to assert tuberculous dyscrasia as one of the predisposing causes of insanity, and that of insanity in general, and will proceed to the direct statements which are to prove the proposition.

My investigation consisted of inquiries among insane, which I have employed all the means in my power to render reliable. The cases of tuberculosis in the families of the patients examined were divided into *near* (which comprise the parents, grandparents, brothers and sisters, and parents' brothers and sisters) and *distant*, or all other relatives beyond those named up to second cousins. Of the "near," I have specially extracted yet those of parents. The two hundred of each sex examined comprise the following mental disorders: Mania: acute, recurrent, and chronic; melancholia: acute and chronic; paranoia, epileptic insanity, general paresis, imbecility, terminal dementia, and a few miscellaneous cases. The respective numbers examined were:

	Men.	Women.		Men.	Women.
Mania, acute.....	8	7	Epileptic insanity.....	18	7
" recurrent.....	2	13	General paresis.....	5	..
" chronic.....	35	22	Imbecility.....	11	5
Melancholia, acute.....	14	17	Dementia, terminal.....	50	25
" chronic.....	17	34	Miscellaneous.....	20	14
Paranoia.....	20	56			

The results, given in percentage, are as follows:

	Men.	Women.		Men.	Women.
MANIA ACUTA:			MELANCHOLIA ACUTA — Continued.		
Tuberculosis in family:			Tuberculosis in family:		
Near.....	25 %	71 %	Absent.....	21.5 %	12 %
Parents.....	..	..	Doubtful.....	35.5	18 "
Distant.....	14 "	14 "	MELANCHOLIA CHRONICA:		
Absent.....	25 "	14 "	Tuberculosis in family:		
Doubtful.....	50 "	..	Near.....	47 "	44 "
MANIA RECURRENT:			Parents.....	18 "	9 "
Tuberculosis in family:			Distant.....	..	9 "
Near.....	50 "	53.5	Absent.....	29 "	20 "
Parents.....	..	23.5	Doubtful.....	23 "	26 "
Distant.....	..	15.5	PARANOIA:		
Absent.....	50 "	7.5	Tuberculosis in family:		
Doubtful.....	..	23.5	Near.....	30 "	43 "
MANIA CHRONICA:			Parents.....	5 "	16 "
Tuberculosis in family:			Distant.....	..	4 "
Near.....	34 "	43 "	Absent.....	30 "	22 "
Parents.....	9 "	19 "	Doubtful.....	40 "	31 "
Distant.....	3 "	..	EPILEPTIC INSANITY:		
Absent.....	15 "	19 "	Tuberculosis in family:		
Doubtful.....	48 "	38 "	Near.....	28 "	57.5
MELANCHOLIA ACUTA:			Parents.....	..	5.5
Tuberculosis in family:			Distant.....	..	..
Near.....	35.5	65 "	Absent.....	22 "	..
Parents.....	14 "	23 "	Doubtful.....	50 "	43 "
Distant.....	7 "	6 "			

	Men.	Women.		Men.	Women.
GENERAL PARESIS:			DEMENTIA, TERMINAL:		
Tuberculosis in family:			Tuberculosis in family:		
Near	40 %	..	Near	22 %	44 %
Parents . . . . .	..	..	Parents	22 "	18 "
Distant . . . . .	..	..	Distant . . . . .	..	8 "
Absent	40 "	..	Absent	26 "	16 "
Doubtful	20 "	..	Doubtful	52 "	32 "
IMBECILITY:			THE TOTAL AVERAGE —		
Tuberculosis in family:			(including few miscellaneous cases):		
Near	36 "	40 %	Tuberculosis in family:		
Parents . . . . .	..	8 "	Near	32 %	47 %
Distant	9 "	..	Parents	9 "	17 "
Absent	36 "	20 "	Distant	2 "	6 "
Doubtful	18 "	40 "	Absent	25.5	17.5
			Doubtful	40.5	29.5

Is there necessary more than a glimpse at these figures to prove their importance? In men 34 and in women 53 per cent of tuberculosis in the family, and in the majority of cases in more than one member! Could such phenomenon be without its value — without a considerable value? And these high numbers bear no trace of exaggeration — rather the reverse. The occurrence of the disease in the families of the patients is, if anything, greater, because: (a) Whilst cases of the disease in the immediate relation are remembered well, those in remote are not known, perhaps not at all, or uncertainly, and such cases had to be included in the "absent" column. (b) In many cases there is more or less ignorance about the existence and whereabouts of the relatives, and consequently their fate is not known; in a few instances this ignorance included absolutely all the relatives — and these cases had to be classed with the "doubtful." (c) In some cases the knowledge of family history has been lost ever since the patient has been in the hospital, which might have been any period of the last ten years, and relatives might have succumbed to the disease in the meantime; some of these cases were classified with the absent (where the time was moderate), the rest with the doubtful. (d) Some of the relatives, who might have transmitted the trait already, and this produced its effects, may be still living and apparently well, and may later, or may not at all, succumb to consumption. (e) As only cases of pulmonary tuberculosis were inquired after, whilst the active disease presents many more types, which it would be impossible to ascertain, yet which can transmit the diathesis just as the pulmonary form, it is certain that many instances were omitted in this way.

The inheritance in the female predominates considerably over that in the male sex. It is a well-known fact that the direct hered-

ity of insanity is also greater in woman, and in somewhat similar relation of percentage — though I would not attach to this relation any specific importance. Both are due, no doubt, to the somewhat inferior resistance of the woman, and to the peculiarities of her mental and physical life. In the different forms of mental disease, if I may be permitted to still, for convenience, employ that ambiguous term, there is an accord between the two sexes only in mania recurrens, chronic melancholia, and imbecility; in all the other forms of alienation the "tare" in women predominates, though a due allowance must be made for the respective numbers examined. Considering all, the always (and especially with the insane) possible errors of information, and, again, the only too probable existence of positive cases among the doubtful, I think we can safely venture to state that some form of tuberculous heredity or other exists in from 40 to 50 per cent of male, and in from 55 to 60 per cent of female, insane patients. Shall we neglect, in our etiology of insanity, a factor of such a potency still further?

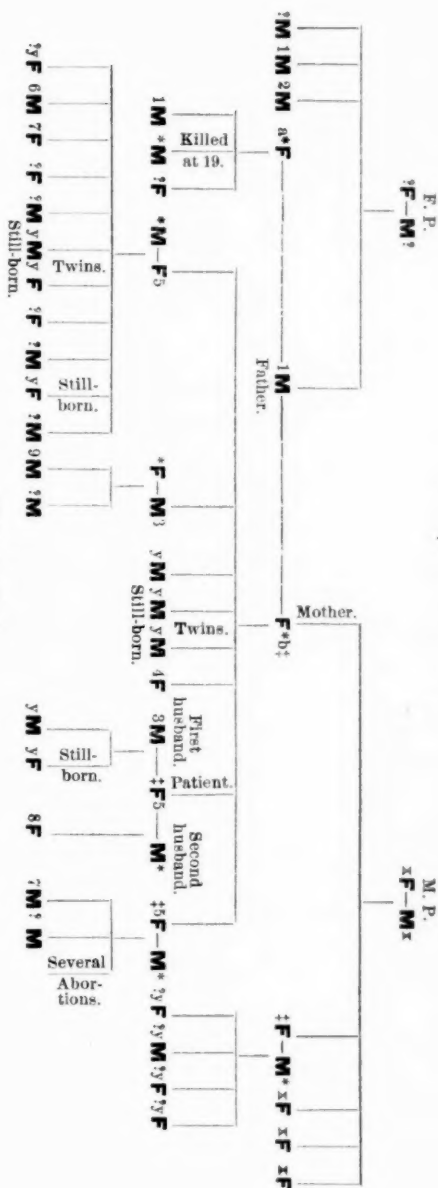
As a termination to my article, I beg to append several genealogical tables, taken at random. They will illustrate better than many words the degenerative conditions in some of the families of the patients.

II. DISORDERS OF SMELL IN THE INSANE.

Would someone ask me what relation the organs of smell bear to insanity, I should have to admit, to the full extent of the word, I do not know, just as I do not know exactly what relation any other organs of special sense can bear to the disease; nor have I found anyone else who knows or even pretends to do so. But, among twenty consecutive autopsies I made within the last two quarters of '94 and the first quarter of '95, I found five cases, or 25 per cent, where the olfactory nerves were in far advanced, or complete, states of degeneration, a fact which led me to the subsequent inquiries and examinations, the abstract of which is here presented. These autopsies were all made within twenty-four hours of death, so that the conditions found could not have been due to post-mortem changes.

It is remarkable how little attention the pathology of the olfactory nerve has yet received. Ziegler, in his great work on pathological anatomy (6 ed.), finds no place for this nerve, and the same is nearly true for Klebs, Green, and other general pathologists. Rosenthal and Groves make a few general remarks on it. The first observer says (Dis. of the Nerv. Syst., p. 187): "In insanity,

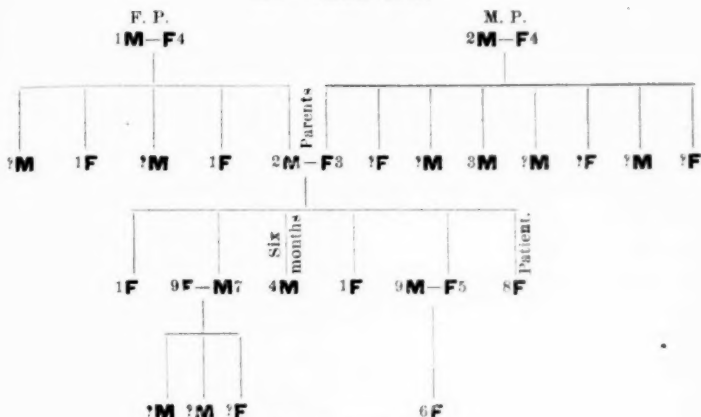
L. CASE 4811.



EXPLANATION.

- F. P. Father's parents. M. P. Mother's parents.
- 1 Consumption—patient's father, half brother, uncle. a Father's first wife. b Father's second wife. † Twins.
- 4 Arthritis deformans; over-pious; death of "congestion of brain" at sixteen; own sister. 3 Feeble constitution—own brother, husband.
- 5 Insane—two own sisters; first mania, recovery; second paranoia; patient, paranoiac; exciting cause in all three, puerperium.
- 7 Precocious. 8 Hydrocephalus; torn from mother in pieces. 9 Rachitis. x Died of epidemic. y Died young.
- * Healthy; several members genital; several very religious.

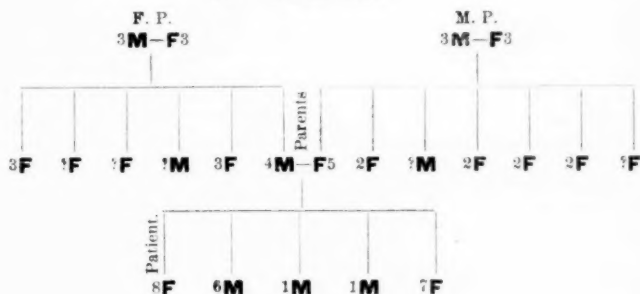
III. CASE 4171.



EXPLANATION.

- 1 Phthisis—Grandfather, two uncles, and two sisters.
- 2 Dysentery—Maternal grandfather; father.
- 3 Apoplexy (cerebral hæmorrhage)—mother, uncle.
- 4 Cause unknown.
- 5 Feeble constitution; death at first childbirth.
- 6 Marasmatic; death in two weeks.
- 7 Chronic digestive troubles.
- 8 The patient—spontaneous delirious excitement, followed by melancholia; debility; morphine habit acquired.
- 9 Healthy.

IV. CASE 2704.



EXPLANATION.

- 1 Normal.
- 2 Phthisis—mother, four sisters.
- 3 Dead; cause unknown.
- 4 Father died of Bright's disease; severe rheumatism for many years.
- 5 Mother always feeble; chronic bowel trouble; spontaneous cataract, both eyes.
- 6 Sister subject to neuralgia.
- 7 Brother had epilepsy up to twenty; chronic rheumatism.
- 8 The patient—hypochondrous melancholiac; congenitally deformed (internal organs of generation).

in which subjective olfactory sensations exist, softening of the olfactory nerve, neoplasms of the base of the brain extending to the anterior lobe, softening or discoloration of the olfactory bulb, and adhesions of the olfactory nerves to the dura mater, have been discovered." Speaking of anosmia, he does not even mention its occurrence among the alienated. Gowers thinks (*Nerv. Dis.*, '88, p. 567) "anosmia is less frequently due to a lesion of the nerve than to disease of the mucous membrane of the nose, chronic inflammations, polypi, etc.," and, "in diseases of the cerebral hemispheres loss of smell is rare," and "functional loss occurs in hysterical hemianæsthesia" (568). Alienists like Tuke, Kraft-Ebing, Griesinger, Spitzka, Hammond, Ball, restrict themselves to the simple consideration of smell hallucinations. Erb (*Ziemsen's Enc.*, Vol. II, p. 262), acknowledges the existence of anosmia in the insane, but believes it "of central origin," and with similar results we may go from one investigator to another; and yet, direct examination on the living insane shows us a marked to an absolute anosmia in 30 per cent of the fair number of four hundred examined, and all these were yet the more recent and lighter cases of insanity.

The same two hundred of each sex were examined as in the first instance, and throughout, and hence were patients of enough intelligence to appreciate and respond to a feeling. Precautions were taken that each patient should know nothing of the nature of the examination before subjected to it. Cases of apparent nasal troubles or colds were avoided, or examined over. In many cases the deficiency found was acknowledged as having been observed already before by the patient himself.

The method of examination was as follows: Three test-tubes of a narrow caliber were taken and filled to about a half with (*a*) a 10 per cent solution of essence of peppermint in oil, (*b*) tincture of camphor, and (*c*) dilute ammonia. These test substances were not picked out entirely arbitrarily. They were chosen, first, as the most common and generally known flavors, and second, on account of the fact that many patients with a moderately dulled smell mistake one for the other, pronouncing ol. menthæ camphor and camphor ammonia. At about the upper end of the third-fourth of each test-tube (from below), a somewhat tightly fitting sponge-plug was placed; it served both as a preventive of spilling the contents, or some of the patients drinking them, and as a moderator of the odor.

Ol. menthæ, having the most transient effect on the olfactory nerve of the three substances chosen, was used first in testing, and was followed by camphor and then ammonia, and enough time and trials were afforded before a decision was formed as to the state of the sense; in consequence there can not be, however delicate be such an examination, much error.

The cases as found were divided into three classes, namely, the normal, or about so, the moderately dulled, and the much dulled to absent. As moderately dulled all those cases were classed which either had difficulty in recognizing the test substances, though familiar with them in general, or who would not recognize one or another at all. Positive anosmia is not easily decided. In many cases where the olfactory nerve is largely affected, the innervation of the fifth is normal or the sensibility of this nerve seems to be even increased, and stronger smells, especially ammonia, are recognized by this sensation and not the smell proper, and hence all such cases were, to avoid false conclusions, included with the considerably dulled under "dull to extinct." I would here again call attention to the fact that the four hundred examined represent practically the lighter cases, in which we would not expect the worst conditions.

Smell, where deficient, was found so in almost all the cases on both sides. No records of hyperæsthesia of the sense were made, and that for the following reasons: Hyperæsthesia of smell is in most its insane owners only subjective, or rather a pathological condition of the centers, and on examination of the organ really an opposite condition is found, that is more or less of anosmia. And there are forms of an intermediate state of affairs, I am sure, where, at the beginning of the degenerative process of the nerve, the condition is manifested as both, outwardly as dulling of the sense and inwardly as its hyperæsthesia. Of course we are absolutely unable to divide such different cases one from the other. True cases of hyperosmia, that is those not dependent on any organic changes, or at least any such of longer duration, are rare, are liable to be periodical, and occur mostly connected with hysteria.

The epileptics form an interesting class of their own; they have all a pronounced hyperæsthesia of the nasal branches of the trigeminus, whilst the olfactory in almost all is greatly dulled.

The following are the brief results of the examination; may they throw some light on one class of the obscure phenomena connected with disease of the mind:

	Men.	Women.		Men.	Women.
MANIA ACUTA:			PARANOIA—Continued.		
Smell: Normal.....	37.5 %	57 %	Smell: Dull to ext..	.35 %	22 %
Mod. dull.....	50 "	29 "	EPILEPTIC INSANITY:		
Dull to extinct....	12.5 "	14 "	Smell: Normal.....	5.5 "	28.5 "
MANIA RECURRENS:			Mod. dull.....	23 "	14 "
Smell: Normal.....	50 "	46 "	Dull to extinct....	72.5 "	57.5 "
Mod. dull.....	50 "	15.5 "	GENERAL PARESIS:		
Dull to extinct....		38.5 "	Smell: Normal.....		
MANIA CHRONICA:			Mod. dull.....	40 "	
Smell: Normal.....	37 "	48 "	Dull to extinct....	60 "	
Mod. dull.....	40 "	28 "	IMBECILITY:		
Dull to extinct....	23 "	24 "	Smell: Normal.....	45 "	40 "
MELANCHOLIA ACUTA:			Mod. dull.....	18 "	60 "
Smell: Normal.....	57 "	60 "	Dull to extinct....	36 "	
Mod. dull.....	21.5 "	23 "	DEMENTIA TERMINAL:		
Dull to extinct....	21.5 "	18 "	Smell: Normal.....	28 "	32 "
MELANCHOLIA CHRONICA:			Mod. dull.....	40 "	20 "
Smell: Normal.....	29 "	50 "	Dull to extinct....	32 "	48 "
Mod. dull.....	41 "	20 "	GENERAL AVERAGE (a few miscella-		
Dull to extinct....	29 "	32 "	neous cases included):		
PARANOIA:			Smell: Normal.....	34 %	44.5 %
Smell: Normal.....	40 "	43 "	Mod. dull.....	33 "	26.5 "
Mod. dull.....	25 "	35 "	Dull to extinct....	33 "	29 "

III. REFLEXES IN THE INSANE.

Insanity has, as yet, no concomitant pathology of the nervous system in general, with the exception, perhaps, of general paresis, and few specific disorders; nor do I think, with our present knowledge, any such can be formed. Nerve disorders are by no means unfrequent in mental disease, and may, in most instances, be proven to be due to it and dependent on it, but they are so variable in the same form of insanity, and again the same symptoms occur irregularly in so many forms of the disease, that we are unable to form, with regard to them, many definite conclusions.

Whenever the nervous system participates in any pathological process, be it substantially or sympathetically, the first affected are usually the parts controlled by the sympathetic; next come the special senses, then reflexes, and finally the voluntary nervous apparatus—gray nervous tissue first, white last. A year ago (Middl. State Hosp. Rep. for 1895, p. 174) I made quite an extended inquiry into the defects of sight and hearing in the insane; this year it were those of the smell, and then reflexes. Feeling and taste, the remaining two senses, although an effort has also been made to inquire into their condition, had to be omitted, on account of insurmountable difficulties such an examination presents with the insane. Suffice it to say in this place, that both these senses present, in this class of patients, many highly interesting and often unsuspected deviations from normal.

Irideal and patellar—the most important and decisive reflexes—were investigated only. In irideal both were examined, the light reflex and that of accommodation.

True nervous diseases existing outside, and probably before the insanity (a fact remarkably rare), were excluded. The results of the examinations are as follows:

MANIA ACUTA.				MELANCHOLIA ACUTA—Continued.			
		Men.	Women.		Men.	Women.	
Light:	Normal....	75	57	Patellar: increased..	21.5	12	
	Diminished..	12.5	43	Absent.....			
	Absent.....	12.5		MELANCHOLIA CHRONICA.			
Reflexes—Irideal:				Light: Normal....	77	74	
Accom'n:	Normal....	62.5	57		Diminished..	17	23
	Diminished..	37.5	43		Absent.....	6	3
	Absent.....			Reflexes—Irideal:			
Patellar:				Accom'n:	Normal..	73	77
	Normal....	25	29		Diminished..	12	23
	Diminished..	62.5	43		Absent.....	6	
	Increased....		29	Patellar:			
	Absent.....	12.5			Normal....	29	44
MANIA RECURRENTS.					Diminished..	29	32
Light:	Normal....	50	69		Increased....	35	20
	Diminished..	50	31		Absent.....	6	3
	Absent.....			PARANOIA.			
Reflexes—Irideal:				Light: Normal....	35	84	
Accom'n:	Normal....	50	84.5		Diminished..	10	14
	Diminished..	50	15.5		Absent.....	5	2
	Absent.....			Reflexes—Irideal:			
Patellar:				Accom'n:	Normal..	85	87
	Normal....		15.5		Diminished..	15	11
	Diminished..	100	53.5		Absent.....		2
	Increased....		31	Patellar:			
	Absent.....				Normal....	40	54
MANIA CHRONICA.					Diminished..	25	22
Light:	Normal....	77	86		Increased....	35	20
	Diminished..	20	14		Absent.....		4
	Absent.....	3		EPILEPTIC INSANITY.			
Reflexes—Irideal:				Light: Normal....	94.5	100	
Accom'n:	Normal....	68	95		Diminished..	5.5	
	Diminished..	29	5		Absent.....		
	Absent.....	3		Reflexes—Irideal:			
Patellar:				Accom'n:	Normal..	94.5	100
	Normal....	85	53		Diminished..	5.5	
	Diminished..	15	28		Absent.....		
	Increased....	29	14	Patellar:			
	Absent.....	3	5		Normal....	67	28
MELANCHOLIA ACUTA.					Diminished..	22	43
Light:	Normal....	78.5	83		Increased....	55	28
	Diminished..	21.5	18		Absent.....	5.5	
	Absent.....			GENERAL PARESIS.			
Reflexes—Irideal:				Light: Normal....	60		
Accom'n:	Normal....	93	89		Diminished..	40	
	Diminished..	7	12		Absent.....		
	Absent.....			Reflexes—Irideal:			
Patellar:				Accom'n:	Normal..	40	
	Normal....	43	65		Diminished..	60	
	Diminished..	85.5	23		Absent.....		

GENERAL PARESIS—Continued.				DEMENTIA, TERMINAL—Continued.			
		Men.	Women.			Men.	Women.
Patellar:				Reflexes—Irideal:			
Normal	40	%	..	Accom'n: Normal	68	%	88
Diminished	..	"	..	Diminished	20	"	32
Increased	60			Absent	..		..
Absent	..			Patellar:			
IMBECILITY.				Normal	46	"	56
Light: Normal	91	"	60	Diminished	22	"	28
Diminished	9	"	40	Increased	26	"	16
Absent	..			Absent	4	"	..
Reflexes—Irideal:				GENERAL AVERAGE.			
Accom'n: Normal	100	"	80	(Few miscellaneous cases included.)			
Diminished	..		20	Light: Normal	79	%	79
Absent	..		..	Diminished	18.5	"	19.5
Patellar:				Absent	2.5	"	1.5
Normal	54	"	40	Reflexes—Irideal:			
Diminished	27	"	40	Accom'n: Normal	77	"	84
Increased	18	"	20	Diminished	21.5	"	15.5
Absent	..		..	Absent	2.5	"	.5
DEMENTIA, TERMINAL.				Patellar:			
Light: Normal	76	"	88	Normal	47.5	"	48
Diminished	22	"	12	Diminished	25.5	"	30
Absent	..		..	Increased	23.5	"	19.5
				Absent	3.5	"	2.5

There are several things of interest in the above numbers. The most striking is the great predominance of variations of patellar reflexes over those of the irideal (5-2). The second, the large number of cases where the patellar reflexes were increased (86 cases). And the third, which, however, is not seen from the table alone, is a very frequently found peculiar state of opposite conditions existing between the patellar reflex and that of accommodation; where this latter was diminished, the former, in a large majority of instances, was found more acute. The general truth is, that the conditions of the different reflexes very seldom correspond with each other, and that is true even as regards their irregularities.

IV. COLOR-BLINDNESS, ETC.

"The proportion of color-blind is about 5 per cent or less among men, and 2 per cent or less among women. This includes all the varieties and degrees of the defect." (Noyes: *Disease of the Eye*, p. 17.) Among the four hundred insane examined, color-blindness was found in only two men and one woman, which means, respectively, one and one-half of 1 per cent; and all these three cases were of an incomplete character.

The method of examination differed somewhat from those usual. Instead of using a skein or colored letters, solutions representing the seven rainbow colors were placed in narrow glass tubes, which were arranged in a frame of 3 x 4 inches. This method is

very simple, and I believe very efficacious. According to the inclination of the frame towards light, the tubes may be brought closer together, and where it seems necessary the light may be transmitted through the tubes and forms almost a perfect spectrum on a white paper behind, which adds to the instrument a further value. I must acknowledge the almost negative results of this examination surprised me, though even with such a number the possibility of accidents can not be excluded.

The last class of phenomena I inquired into is of a pure psychological order, and one of the most obscure; it comprises a few of purely psychical inclinations, as found in the insane patients.

It is commonly acknowledged that in every individual there is such a thing as a "nature;" a psychologist would state, every organization is slightly different from all others, and its psychical manifestations are correspondingly different; and both the layman and the scientist know that there are certain classes of these "natures." They are natural, or inborn, inclinations of faculties, and should not be mistaken for temperaments, which mean the ways of action and reaction of a being.

The inclinations of man's faculties consist mainly of (1) attraction toward an object, (2) indifference to it, or (3) aversion. Noticing these phenomena in the insane with relation to objects, both well defined and of common interest, I soon found some peculiarities that promised me that a closer and extended inquiry into the subject would not be without due compensation. I decided to choose the sciences preferred in schools—where the being is guided by the most natural, his virgin, inclinations, for it is these and not any that may have been acquired or modified by exigencies, duty or reason that are of true and prime psychological value. The investigation was conducted necessarily entirely by personal inquiry with each patient; the method pursued was to ascertain, first, if the examined had or had not a sufficient education; next, if he had sufficient, how he learned; and last, which of the various branches of learning he preferred most. Here are the results:

MANIA ACUTA—Subjects preferred in learning:

	Men.	Women.
Geography.	12.5 %	43 %
History.....	..	..
Mathematics.....	12.5 "	..
None or misc.....	25 "	14 "
Too little school.	50 "	43 "
MANIA RECURRENS:		
Geography.....	50 "	23.5 "

MANIA RECURRENS—Continued.

	Men.	Women.
History.....	31 %	%
Mathematics....	50 %	31 "
None or misc.....	..	7.5 "
Too little school...	..	7.5 "
MANIA CHRONICA:		
Geography.....	15 "	14 "
History.....	15 "	14 "
Mathematics....	20 "	19 "

MANIA CHRONICA — Continued.

	Men.	Women.
None or misc...	34	33
Too little school.	17	24
MELANCHOLIA ACUTA:		
Geography	7	18
History	21.5	50
Mathematics.....	35.5	18
None or misc.....	14	12
Too little school.	21.5	6
MELANCHOLIA CHRONICA:		
Geography	6	26
History	6	26
Mathematics.....	23	..
None or misc.....	41	26
Too little school.	23	20
PARANOIA:		
Geography	25	16
History	10	31
Mathematics.....	35	7
None or misc.....	25	31
Too little school.	5	13
EPILEPTIC INSANITY:		
Geography .....	..	..
History .....	..	..
Mathematics.....	61	14
None or misc.....	22	57.5

EPILEPTIC INSANITY — Continued.

	Men.	Women.
Too little school.	17	28.5
IMBECILITY:		
Geography.....	27	..
History.....	..	10
Mathematics.....	18	35
None or misc.....	45	55
Too little school.	9	..
GENERAL PARESIS:		
Geography.....	..	..
History.....	..	..
Mathematics.....	80	..
None or misc.....	..	..
Too little school.	20	..
TERMINAL DEMENTIA:		
Geography.....	12	8
Mathematics.....	10	8
History.....	22	4
None or misc.....	44	60
Too little school.	12	20
GENERAL AVERAGE:		
Geography.....	13.5	14.5
History.....	9.5	22.5
Mathematics.....	28.5	17.5
None or misc.....	32.5	27.5
Too little school.	16	17

Several very apparent deductions can be drawn from the tables:

History (and abstract sciences) is much more favored by women, and especially by the female melancholiac and paranoiac. Mathematics forms almost an exclusive preference with the epileptics and in general paresis. Most indifferent and illiterate are among the terminal dementes.

Strong musical inclination is very prevalent (23 per cent) among female and slightly less among the male paranoiacs; but many of these insane soon lose the best of their qualities of composing, playing, and singing.

Artistic tendency is very pronounced, and almost general, in several species of insanity (viz., Lombroso, *Genie*, p. 284); it is common with paranoiacs. I have several pictures made by paranoiacs, and that in some instances almost untrained ones, that are worth looking at, at least; and the local journal of the Middletown State Hospital bears many a trace of "insane" inspiration that is worth a perusal. I regret the extent of my article prohibits me from introducing a few examples, and speaking of this interesting subject more in detail. * * *

I conclude: I have tried to do my work sincerely; may it be thus accepted. And I extend herewith my thanks and gratitude to the authorities of the Middletown State Hospital for the Insane, by whose courtesy I have been enabled to make these investigations.

A REVIEW OF THE SIGNS OF DEGENERATION AND OF METHODS OF REGISTRATION.*

BY ADOLF MEYER, M. D.,

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Grown up in the Darwinian movement, we can hardly realize the primitive meaning of the general expression degeneration, as used by the writers who first introduced it. *Morel* speaks of the existence of a primitive perfect type of the human race; he calls it the master work and sum of the creation; as such, "it has received the threefold sanction of revelation, of philosophy, and of natural history." Degeneration is for him a pathological deviation from this biblical primitive type, a degradation of the progeny. While the physiological deviations are due to the influence of the climate, the nourishment, and the habits of life, the pathological deviation or degeneration is due to exaggerations and abnormalities of these influences: Intoxications, bad social surroundings and unhygienic conditions, diseases, moral defects, congenital or early acquired influences, heredity. *Morel's* studies on the very pronounced forms of degeneration in idiots, in cretins, etc., were subsequently extended more minutely to the insane, the criminals, and, since the importance of heredity in nervous affections has been more noted, to the "neuropathic family." At first the term merely comprehended the most obvious types of defectiveness. *Lombroso*, with his numerous followers in criminal and pathological anthropology, *Benedikt*, in his studies on the brain of criminals, and numerous writers on allied subjects, gradually extended the scope of their investigation and accumulated a great amount of interesting material. One of the chief features of this progress lies in the change of the philosophical position prevailing in our epoch. The originally perfect man has been swept away by the doctrine of evolution. Comparative anatomy, morphology, and ethnology have opened a great field for speculation in a new direction. The perfect man of the new school is he who is as free as possible from the character-

* The following notes were originally prepared for, and read as, the opening of a discussion of the "Study of Degeneration," at the meeting of the Association of Assistant Physicians of Hospitals for the Insane. As the desirability of studies in this line appealed to a majority of the association, the methods were taken as a starting basis for coöperative work, to be modified in subsequent meetings.

istic features of phylogenetically less mature types. Everything that reminded strongly of possible ancestors of a lower degree was stamped with the term atavism. The ardent search revealed indeed a great number of such features in the so-called defective elements of the human race, and the creation of the types of degeneration—the criminal, the neurotic, the imbecile, the insane, etc.—has, perhaps, been based too much on the “atavistic” features. The good influence of the general principles of evolution is quite evident; but just as in much of the evolutionary literature, we find often that the existence of similarity with less mature types satisfied the minds that the features were “degenerative,” and an investigation of the physiological reasons for the existence of the forms was dispensed with.

This movement could not help calling forth strong protest, and we may say that we stand at present in a wave of reaction. Quite a number of sober naturalists and anthropologists assume a non-committal position and approach the problem from a point of view similar to this: The so-called normal type is an arbitrary assumption and embraces a great number of physiological variations. It remains to be seen whether certain variations of form or function by themselves or in groups constitute actual signs of degeneration; *i. e.*, whether they are signs of constitutional inferiority, with a tendency to become more marked in the offspring. That there are such signs of degeneration, nobody would deny to-day; but their relative importance and the laws of their formation require a broader investigation. The number of observations is relatively so small that it is hardly ripe for general conclusions.

The practical value of our *present* knowledge of the signs of degeneration is perhaps overrated by those who believe they have found a scientific phrenology. Probably for a long time to come the study of the mental capacity and potentiality will be best carried out by studying the psychical manifestations rather than the physical forms of a person. The objection is raised that the study of the so-called signs of degeneration is not even of practical importance for the alienist. This is only true to some extent. Criminologists make use of the signs of degeneration in court. The physician must form an opinion of his own on the question if he will do justice as an expert. Or shall he simply repeat the conclusions drawn by others, on a very limited material? Why not unite for a broad, uniform investigation? Another problem is bound to become more and more important: the question of mar-

riage in those afflicted with signs of degeneration. The questions will arise: How far are the stigmata constitutional? How far do these localized brand-marks of the sins—unconscious or conscious—of the parents affect the entire personality? Which are the chief provoking agencies in their formation? Why do we find families with stigmata of degeneration going from bad to worse, and others grow up again and develop healthy and prospering children?

Let us admit that these questions touch problems which, to-day, are purely theoretical. Why? Because we do not know enough yet of the facts that underlie the acknowledged influence of heredity and the laws of growth and development.

That the alienist, who is every day confronted with the enigma of hereditary degeneration, will feel as deep an interest in the matter as any one, is evident. But he is also the one who, next to the criminologist, needs the most warning against premature conclusions.

For statistical purposes, for the mere study of frequency, our hospitals offer unique chances. But the great mixture of nationalities, with their strongly varying "normal" types, the great variety of diseases, the difficulty in ascertaining the history of the family and of the patient, make a great number of precautions necessary. The ideal method of procedure would be to examine whole families of one nationality, of the same locality, and the same conditions of life; to compare them with branches of the families which live in different climates and conditions; to study the results of inter-marriage, etc. Even if the chances for such work could be obtained it would be difficult enough to elucidate the causes of variations.

Our chances are not as favorable, but none the less worth our attention. If we make it a rule to look over our new patients at the physical examinations, and to use systematic methods of registration of whatever we find time to examine closely; if we further try to see the relatives; if we watch whether a person with signs of degeneration develops features of insanity different from those who have no stigmata in themselves or in their family; if we are able to gather a vast array of carefully, conscientiously collected data, even on a limited number of factors only—if we have done all this, we have done ourselves and the patients and those after us our best service. We must not try to do too much at once, but be sure that we can carry out our plan within the domain that each of us may choose.

In order not to rely only on our own observation, and in order to sum up our work, we must agree on definite methods, and for this

purpose the following notes are offered as a suggestion. A test by many will soon sift the unpracticable ones, and experience of a whole body of workers will establish a mutual ground.

Before entering upon the methods, we shall shortly review the classes of disorders to which the authors have drawn our attention:

A. *Morphological deviations from the normal.*

I. Deviations of the general proportions of the body. The hands and arms, the feet and the legs, the trunk, the neck, the head (as a whole) and its various parts (skull, face, jaws, mouth, nose, etc.) may be too small or too large in proportion to the rest of the body.

II. Asymmetries of skull, face, and rest of the body.

III. Peculiar forms of special parts—skull (especially forehead and occiput), face (jaws, teeth, palate, lips, nose, ears, eyes), teratological peculiarities generally.

B. *Functional deviations from the normal.*

I. Abnormal innervation of one side, or of special muscles, or of vasomotor nerves.

II. Developmental irregularities—in dentition, learning to walk and to speak; enuresis nocturna, inclination to epileptic and other nervous attacks, etc. Lack of congruity between age and appearance.

C. *Purely psychical stigmata.*

Abnormality of sensory perceptions (especially the pain sense); abnormalities of habits, of ideation, of action (sexual life, emotional attitude, egotism, disequilibrium, imperative ideas, mental "tics," associated movements, explosive activity, periodicity, etc.).

For the latter group the book of Dr. J. L. A. Koch on "Die psychopathischen Minderwertigkeiten," and the one of Cullerre on the "Borderland of Insanity," offer a great number of instances.

In a general way, the examination of each case should extend over the principal features which determine the general anthropometric make-up of the individual, even if only a part is examined completely (for instance, the ear). An ear may be large in a small woman, small in a large man, etc. The following data should be given in every case:

No.; name,; relation of No.,; sex,; age,; place of birth,; nationality,; religion,; occupation,; weight,; height,; color of hair,; of iris,

For the general relations of the body the following measurements were primarily chosen for use in the autopsies at the Kankakee Hospital:

Weight.
 Height of vortex.
 Height of vertebra prominens.
 Height of perineum.
 Height of spina ossis ilei — right; left.
 Height of knee — right; left.
 Height of tip of middle finger — right; left.
 Height of acromion — right; left.
 Length of acromion — elbow — right; left.
 Length of acromion — tip of middle finger — right; left.
 Girth of neck.
 Girth of chest.
 Girth of waist.
 Girth of hips.
 Girth of wrist — right; left.
 Girth of arm — right; left.
 Girth of forearm — right; left.
 Girth of thigh — right; left.
 Girth of knee — right; left.
 Girth of calf — right; left.
 Girth of ankle — right; left.
 Length of foot — right; left.
 Breadth of shoulders.
 Breadth of hips.

To these measurements should be added in the living:

Circumference of chest at deepest inspiration.
 Circumference of chest at deepest expiration.
 Capacity of lung (spirometer).
 Strength of squeeze — right; left.

The points from which the measurements are taken are those described by Dr. E. Schmidt.*

For the elbow-joint we take the point between the humerus and the capitulum radii; for the knee-joint, the articulation is easily felt just outside of the patella or inside of it. The girth of the chest is taken over the middle of the sternum, just under the axilla; the girth of the waist in the middle between margin of ribs and crista ossis ilei; the girth of the hips below the crista. The girth of the wrists and of the ankles is taken as a means of comparison between size of the skeleton and of the soft parts, as given

*Anthropologische Methoden, von Dr. Emil Schmidt. Leipzig, 1888: Veit & Co.

by the measurements of the arm and calf; it is therefore taken at the thinnest points, not around the epiphyses of the bones, but a little above them. The girth of the thigh is taken just below the gluteal fold.

Completer anthropometric blanks are used in many prisons and reformatories (see the report of the Elmira Reformatory). The above list of measurements appeals to me because it reveals asymmetries, atrophies, etc., sufficiently without being too long.

For the measurements of the head, Peterson* gives eleven measurements, with a full description of the method. In the autopsies at Kankakee I chose nine, one of which, the bi-temporal diameter, should be replaced by the binauricular diameter. The list is now:

- Diameter naso-occipitalis.
- Diameter biparietalis.
- Diameter binauricularis.
- Diameter mento-occipitalis.
- Diameter zygomaticus.
- Diameter of lower jaw (gonia).
- Facial length.
- Circumference of head.
- Sagittal line.

On the whole, the points from which the measurements were taken coincided with those that form the starting point of Rieger's system of craniography. The facial length is taken from a point which lies in the connecting line of the two upper orbital margins to the chin. The upper end of this line is about five mm. above the actual root of the nose, which is sometimes a rather indistinct point.

For the study of facial asymmetries the following oblique measures should be taken:

- Distance from the external angle of the eye to the angle of mouth—right; left.
- Distance from tragus to chin—right; left.
- Distance from tragus to root of nose—right; left.
- Distance from tragus to tip of nose—right; left.
- Distance from tragus to external angle of eye—right; left.

These measures, supplemented by a photograph profile view and one front view, will answer all the purposes, with the exception of the study of asymmetry of the skull, for which Peterson also

*"Cranimetry and Cephalometry in Relation to Idiocy and Imbecility," by Frederick Peterson, M. D., *AMERICAN JOURNAL OF INSANITY*, Vol. 52, pp. 73-89.

recommends taking curves, either with a lead strip or lead wire, or with the instrument of Luys.

A great improvement on the separate measurement of the diameters and the circumferences is the method of craniography of Rieger.

The principal feature of Rieger's craniography is the registration of curves, of outlines instead of mere distances; further, the use of the so-called millimeter paper, which allows one to dispense altogether with the endless series of numbers. The plane of the fundamental curve corresponds approximately to the basis of the hemispheres and is easily ascertained; all the other transverse and longitudinal curves of the convexity are erected on it.



FIG. 1.

Rieger proceeds as follows: Two threads are tied together so as to form a cross. The ends are made heavy by attaching small weights of lead. The node of the cross is put on the vertex, in the median line; the anterior line goes along the dorsum of the nose, the posterior one through the middle of the nuchal groove; the lateral lines are conveniently put so that they pass over the anterior wall of the external auditory meatus. The fundamental circular curve, indicated by a rubber ring, is fixed by an anterior and a posterior point. The anterior point is chosen where a prolongation of the dorsum of the nose would cut the connecting line between the two upper orbital margins. The posterior point is given by the external occipital protuberance, or where it is not felt by the

median point of the upper margin of the nuchal muscles. The rubber ring is so adjusted as to form a perfectly even horizontal plane. (Fig. 1.)

A square piece of millimeter paper is prepared, of about thirty cm. side. It is conveniently numbered, as Rieger's Fig. 15 shows, not from the real center, but from a point about two fields to the right of, and below, the center of the chart. This point forms the zero point of the graphic system of the two axes.

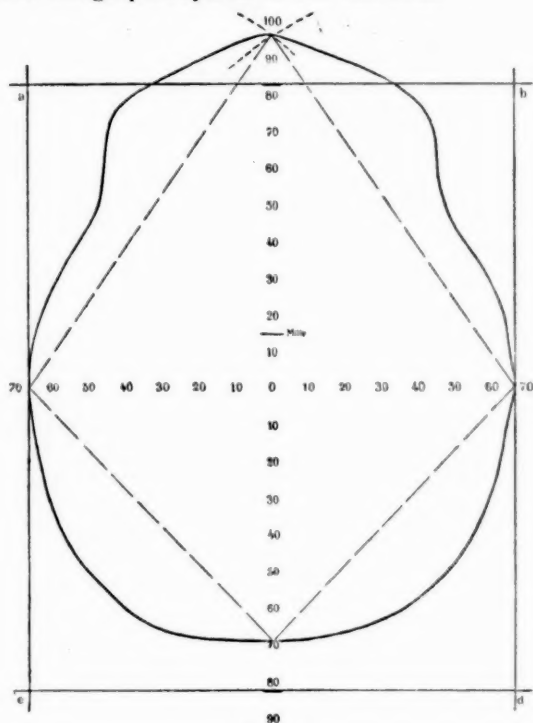


FIG. 2.

In order to obtain the fixed points of the rubber ring, the transverse diameter between the two lateral points is first measured. The distance is registered on the transverse axis of the paper, one-half of the distance to the left, the other half to the right, of the zero point.

The anterior point is obtained with a compass or caliper, one arm of which is armed with a pencil. We measure first the distance from the left lateral point and register it on the paper as a circle;

The circular curve connecting the four points is next taken. Lead wire, pliable but absolutely unelastic, is the best material; it is pressed strongly against the head, only one quadrant being taken at a time. The line is, for the sake of accuracy, first marked with an ordinary pencil, and afterward repassed by a red pencil or with red ink. It is evident that the line obtained is somewhat vitiated by the temporal muscle. For this and other reasons it may be advis-

able to take one or more horizontal curves above the insertion of the temporal muscle. These planes must be perfectly parallel with the fundamental curve. A second rubber ring is applied; the measurements and curves are registered in identically the same manner as those of the first plane. Rieger marks this upper curve in blue color. If this blue curve is not larger than the red one, the head is more or less microcephalic.

The next curve is that of the median sagittal line. It would be too large to be obtained accurately at one time. It is therefore conveniently taken in two pieces, divided by the node of the cross. This node is ascertained by taking its distance from the four fundamental points with the compass or caliper (Fig. 3). The curve is drawn (in red) to the left from the median line, and does not interfere with the other lines of the drawing. If a depression should be taken, one or more parallel curves may be ascertained after the same plan. The chief condition is that the fixed points be first accurately registered, and that the lead wire be accurately applied and the curve tested before it is drawn with the pencil.

The transverse curves are to be taken in planes which are exactly perpendicular on the fundamental plane. If this rule is not observed caricatures may be the result, and artificial asymmetries will occur. The cross of thread may be, but usually is not, in this perpendicular plane. Fig. 3 shows that the point of intersection k is a certain distance in front of the transverse line, which goes through the zero point and the two lateral fixed points of the cross; our curve must therefore be taken through that point of the sagittal line which lies just that distance behind the point of intersection. For planes anterior or posterior to the cross of threads the corresponding point of the sagittal line is also found with the help of the drawing ($x' l' h'$ and $x'' l'' h''$). But, even if we know the correct point of the sagittal line, we must be careful to take the lateral halves of the curves exactly in the vertical plane, and not to choose the shortest way simply. In order to be quite sure, I should suggest a little brass instrument of T shape; the sagittal line is put on the median line; the cross branches must be of sufficiently firm material to keep the right angle when bent; *i. e.*, it must not be readily twisted. Rieger enters the curves in green color, and forward.

To the comfort of the reader, I may say that the execution of the craniographic method is much easier than the study of a condensed description, and that it requires little practice to read from the

drawing a mental reconstruction of the skull, with all its curves. At the same time all the measurements are registered without the burdensome array of figures, and any number of measurements can be read from the sketch, while the examination after the old method is unsatisfactory and inaccurate for the study of asymmetries, and, if the patient is gone, does not allow of any additional investigation.

This abstract of part of Rieger's paper* can not replace the original, which is herewith highly recommended as a very suggestive guide, and an argument in favor of accuracy. Even those who have not the time to take all the measurements do well to register the few they take after Rieger's plan.

A few words may be said here with regard to the deformities which may be met:

Virchow has given a very complete classification of the malformations of the skull, based largely on the observation that premature synostosis of a suture produces shortness of the diameter perpendicular on the direction of the obliterated suture; the bone stops growing prematurely where the synostosis has occurred, whereas the not affected borders continue growing. Virchow's classification is as follows:

1. Simple *macrocephalus*:
 - A. Hydrocephalus.
 - B. Kephалones (without hydrocephalus).
2. Simple *microcephalus* (*nannocephalus*).
3. *Dolichocephalus*:
 - A. Upper middle synostosis:
 - Simple dolichocephalus (synostosis of sagittal suture).
 - Sphenocephalus (synostosis of sagittal suture and compensatory growth in the region of the large fontanel).
 - B. Inferior lateral synostosis:
 - Leptocephalus (synostosis of frontal and sphenoid bones).
 - Klinocephalus (synostosis of the parietal or sphenoid bones).
4. *Brachycephalus*:
 - A. Posterior synostosis:
 - Pachycephalus (synostosis of parietal bones with the occipital bone).

*Eine exacte Methode der Craniographie von Dr. C. Rieger, Würzburg. Jena, Gustav Fischer, 1885; \$1.15.

Oxycephalus (synostosis of parietal bones with the occipital and temporal bones, with compensatory growth of the region of the anterior fontanel)—acrocephalus.

B. Upper anterior and lateral synostosis:

Platycephalus or chæmocephalus (extensive synostosis of frontal and parietal bones).

Trochocephalus (partial synostosis of frontal and parietal bones in the middle of the half of the coronal suture).

Plagiocephalus (unilateral synostosis of frontal and parietal bones).

C. Inferior median synostosis:

Simple brachycephalus (early synostosis of the basal and sphenoid bones).

Drawings of several of these extreme and well characterized types can be found in the paper of Dr. Peterson and in the "Reference Hand-Book for the Medical Sciences" (Frank Baker, the "Joints of the Skull," Vol. VI, p. 462). Dr. Peterson also mentions the scaphocephalus and trigonocephalus.

The following general features have been especially mentioned in connection with the insane:

1. Crania progenæa (L. Meyer), defective development of the posterior parts of the skull, breadth of the parietal and temporal bones, and projection of the maxilla.

2. Plagiocephalus.

3. Flat occiput (often due to rickets).

4. Low, sloping forehead.

Attention has also been drawn to deformities of the thorax (see the paper of Dr. Neff). Whereas the emphysematous, the paralytic, and the rachitic thorax has largely clinical interest, the skoliotic and kyphoscoliotic thorax may depend on a congenital weakness of the muscles of one side or on an acquired weakness, as in syringomyelia, etc. A peculiar retraction of the lower end of the sternum, called trichterbrust (funnel-breast), has been described as a sign of degeneration; the pectus carinatum, or pigeon-breast, might be called the reverse, and is also mentioned.

A very excellent system of dynamometric measurements for most muscles has been invented by Dr. Kellogg. As it belongs more into the field of clinical work and treatment than into that of the study of degeneration, we simply mention it here. It is of

great practical value, and will help to introduce rational gymnastics.*

The Face.—While the facial angle is not so frequently mentioned in recent literature, various parts of the face have been the subject of much investigation regarding the signs of degeneration. The face and its expression are indeed the chief guides in daily life in judging people by their appearance.

General asymmetries of the face are already included in the measurements given above. There remains the study of the special parts. The eyes have not, so far, been much subjected to the study of degeneration. Whether any one of the five types of Metschnikow is prevailing can not be said. We find mentioned:

1. Congenital coloboma of the iris, which is so rare that it belongs among the monstrosities, and is of little importance among the insane.

2. Ptosis, congenital.

3. Asymmetrical coloration of the iris, in toto or in part.

4. Oval or eccentric pupil.

As functional stigmata nystagmus and strabismus are mentioned.

On the *nose* we have not been able to find any data. The types of noses given by Topinard (*Anthropologie*) might form a basis for a study.

The *jaws* have attracted far more interest. Since Dr. Boody gives an excellent review of work done on this subject, I can limit myself to very short remarks. Most attention, so far, has been devoted to the upper jaw and palate; little has been done on the lower jaw, and even on irregularities of dentition. Dr. Channing, who has a collection of over 1,000 casts of palates of idiots, had the casts made in a systematic way and measured the casts, a plan which deserves imitation. If possible, a cast of both the upper and the lower jaw should be made, and the relation in the position of the two must be ascertained. The dentists of the institutions will be able to demonstrate the methods; the measurements can be made later.

The typical stigmata are:

1. Prognathia, a projection of the mandibula. This point played an important rôle in the Prendergast trial, where the prosecuting attorney was pleased to formulate his question to the witnesses as follows: "Do you believe in the jaw-theory of insanity?"

* Kellogg, J. H., "A New Dynamometer for Use in Anthropometry," and various other papers. Battle Creek, Mich., 1893.

2. Irregularity in dentition; persistence of milk-teeth (especially of an eye-tooth).

Irregularities of the position of the teeth.

Irregularities of the shape of the teeth.

3. The abnormal configuration of the palate.

a. The margin (alveolar circle) may be too wide, too narrow, pointed (V-shaped), saddle-shaped, asymmetrical.

b. The vault of the palate may be abnormally high, asymmetrical, etc.

c. There may be a longitudinal torus or ridge in the median line.

d. Cleft palate, hare-lip, etc.

Further, we find data on the thickness of the lips; especially thickness of the lower lip, is to this day called a sign of sensuality.

The ear has furnished the greatest number of types of degeneration, as the notes of Morel and the papers of Binder,* Gradenigo,† Váli,‡ Frigerio,§ and Petrona Eyle|| will show.

G. Schwalbe,¶ the anatomist of Strassburg, has given the subject the broadest study, and it will certainly be advisable in future study to follow his outline, which is based on the principles of Bertillon's Identification Anthropométrique (Melun, 1893).

Binder gives in his monograph the following analysis of Morel's ear (the ear of the degenerate):

1. Anomalies in the configuration of the ear as a whole:

a. The variations in size.

b. The implantation.

c. Abnormalities in the general configuration.

d. Inequality of the two ears.

2. Anomalies in the architecture and form of the parts composing the ear:

*Binder, Das Morel'sche Ohr, Arch. f. Psych., Vol. XX, 1889, p. 514 ff.

†Gradenigo, Zur Morphologie der Ohrmuschel bei gesunden und geisteskranken Menschen und Delinquenten. Archiv für Ohrenheilkunde, XXX, 1890.

—, Über die Formanomalien der Ohrmuschel. Ibid. Vol. XXXII and XXXIII, 1891.

—, Centralblatt für d. medic. Wissenschaften, 1888.

‡Váli, Allg. Wiener Medic. Zeitung, Nov. 11, 1891.

§L'oreille externe, Archives de l'anthropologie criminelle, 1888.

||Petrona Eyle, Über Bildungsanomalien der Ohrmuschel. Zürich, 1891.

¶Schwalbe, Das Darwin'sche Spitzohr beim menschlichen Embryo. Anat. Anz., 1889.

—, In wie fern ist die Ohrmuschel ein rudimentäres Organ? Archiv. f. Anat. und Phys. Anat. Anz., 1889. Supplement.

—, Beiträge zur Anthropologie des Ohres. Internationale Beiträge zur wissenschaftlichen Medicin; Festschrift für R. Virchow. Bd. I, 1891.

—, Zur Methodik statistischer Untersuchungen über die Ohrformen von Geisteskranken und Verbrechern. Arch. f. Psych., Vol. XXVII, p. 633.

a. The lobule may be excessively long or adherent, or absent. Coloboma, lobuli. Hypertrichosis.

b. Anomalies of the helix.

c. Anomalies of the anthelix.

d. Anomalies of the crura furcata and fossa ovalis.

e. Anomalies of the tragus and anti-tragus.

f. Anomalies of the concha and fossa cymbae.

g. Anomalies of the fossa scaphoidea.

From the analysis of these points he arrives at the following types of ears:

1. The defectively implanted ears.

2. Excessively large ears.

3. Excessively small ears.

4. The excessively folded ear.

5. The irregularly shaped ear (especially the ear with abnormally small upper portion).

6. Ears varying in breadth.

7. *Blainville's* ears (asymmetry of the two ears).

8. Ear without lobule.

9. Ear with adherent lobule.

10. *Stahl's* ear (1). The helix is very broad in the transverse portion and partly covering the fossa ovalis. The lower part of the helix is absent.

11. *Darwin's* ear (with marked tubercle at the beginning of the descending part of the helix).

12. *Wildermuth's* ear; anthelix prominent.

13. The ear without anthelix and crura furcata.

14. *Stahl's* ear (2). Wide bifurcation of crura; multiple bifurcation, especially of the upper crus.

15. *Wildermuth's* Aztek's ear. Lobule absent. The upper crus of the anthelix goes over into the flat helix without any demarkation; the lower crus is very deep and apparently absent, the upper crus thus forming the margin of the concha.

16. *Stahl's* ear (3). Only the crus antierius present; the crus superius merely a node of cartilage. The concha apparently divided by an additional process starting from the anti-tragus.

17. The ear with double helix, the crus superius not even indicated; rare.

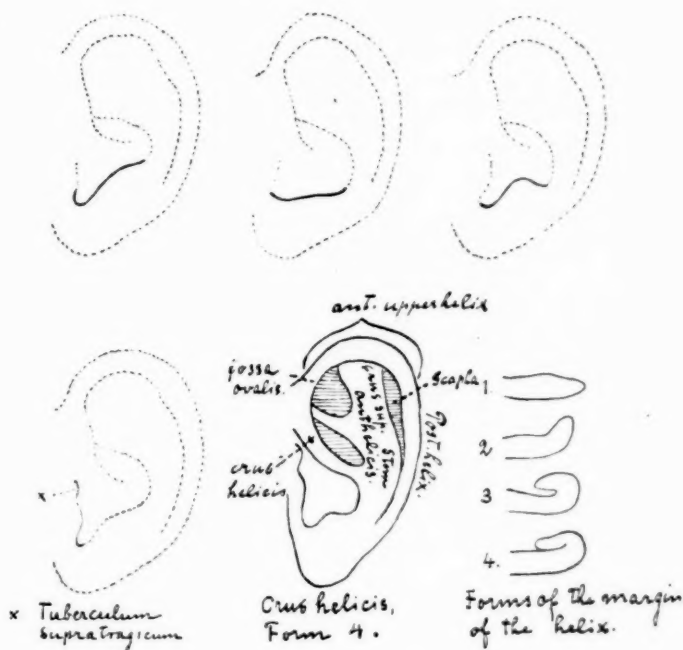
18. Concha too large or too small.

19. The ear with a scaphoid fossa extending into the lobule.

20. *Morel's* ear; flat and broad in the upper parts. Crus superius, broad, flat; scapha, broad, shallow.

21. Malformations of cartilage excluding the one caused by othæmatoma.

Antitragus.



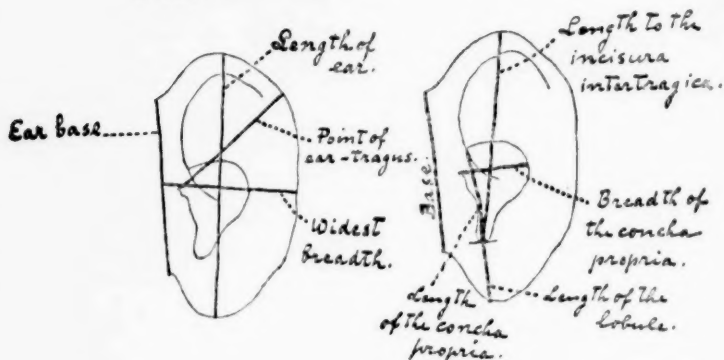
Nomenclature and Types of The lobule.

22. Atypical malformations, coloboma, etc.

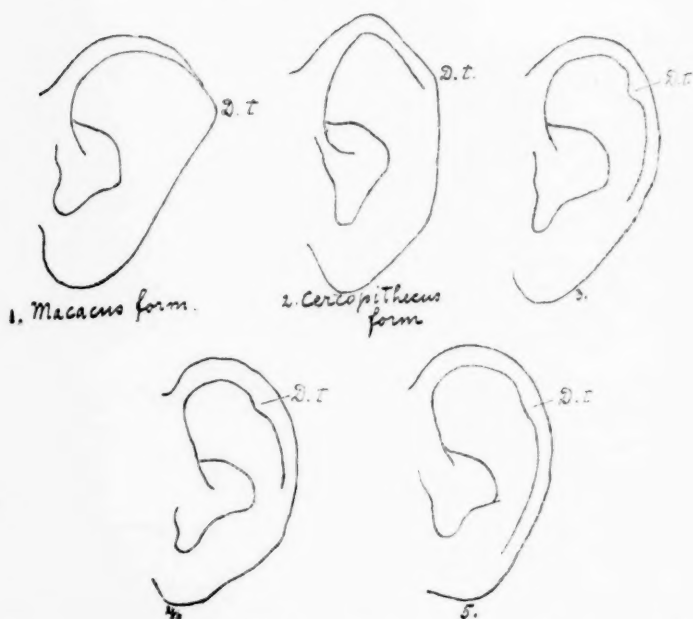
An attempt at using this tabulation shows at once the difficulty in placing transition forms. The use of arbitrary types has, there-

fore, been replaced by Schwalbe by an analysis of the parts of the ear. His chart contains thirty-four questions on each ear, perhaps

Measurements:



Darwin's Tubercle:



a great number at first sight, but not over-accurate for him who tries to follow it for some time. The drawings made after those

CHART FOR RECORDING DATA AS TO EAR, ETC.

No.		Name.		Disease.		Nationality.		Birthplace.		Hereditary.		Other signs of degeneration.	
Sex.	Religion	Occupation	Age	Height.	Color of Hair.	Color of Iris.	Length-breadth Index of Head.	Physiognomic Index.	Ear-Index.	Morphological Ear-Index.			
Greatest length of head.....													
Greatest breadth of head.....													
				R. L.									
Greatest length of entire ear.....													
Greatest breadth of entire ear.....													
Length of ear base.....													
Length of concha propria.....													
Breadth of concha propria.....													
Distance of upper end (Darwin's tubercle) to upper margin of tragus.....													
Length to incisura intertragica.....													
Length of lobule.....													
<p>HELIX.</p> <p>Darwin's tubercle (Macacus, 1; ceropithecus, 2; reverted pointed, 3; reverted rounded, 4; indicated, 5; absent, 6).....</p>													
<p>ANTHELIX.</p> <p>Stem of the anthelix (retracted, 1; in the level of the ear, 2; prominent, 3).....</p> <p>Crus anthelicis superius (absent, 1; indicated, 2; medium, 3; strongly developed, 4).....</p> <p>Crus anthelicis tertium (present, 1; absent, 0).....</p> <p>Other accessory crura anthelicis (describe, if present; absent, 0).....</p>													
<p>ANTTRAGUS.</p> <p>Direction of upper margin (horizontal, 1; medium, 2; oblique, 3).....</p> <p>Inclination outward (absent, 1; medium, 2; pronounced, 3).....</p> <p>Form (straight, 1; slightly arched, 2; with marked prominence, 3).....</p>													
				R. L.									
LOBULUS AURICULÆ.													
Attachment (prolonged on the cheek, 1; simply adherent, 2; partly separated, 3; free, 4).....													
Sulcus supratubularis (absent, 1; medium, 2; marked, 3; connected with scapha, 4).....													
Sulcus obliquus (absent, 1; only in anthragus region, 2; complete, 3). Tuberculum retrolobulare (absent, 1; medium, 2; marked, 3).....													
Sulcus lobuli verticalis (absent, 1; medium, 2; marked, 3).....													
Direction of lobule (bent inward, 1; straight, 2; bent outward, 3).....													
Lobule split (split, 1; not split, 0).....													
Position of ear (closely attached, 1; medium, 2; almost at right-angle, 3).....													
General form of the ear.....													
Insertion of ear (straight, angle less than 112° 1; oblique, angle more than 112° 2).....													
Auricular appendices.....													
Fistula auris congenita.....													
Anomalies of teeth.....													

published in his paper in the *Archiv. für Psychiatrie*, and a few explanations, will help the beginner.

The head-index is obtained by dividing the greatest breadth by the greatest length and by multiplying the result by 100.

The physiognomic ear-index is 100 times the quotient of breadth by length.

The morphological ear-index is 100 times the quotient of the base and the distance between the tragus and the point of the ear (Darwin's tubercle).

The various types of Darwin's tubercle, which corresponds to the point of the ear in animals, are represented in the drawings.

The satyrpoint is not often present; it forms what the layman might call the point of the human ear, similar to what is seen in the drawing of the cercopithecus form.

For the position of the ear to the skull, or more especially the mastoid process, Schwalbe does not require the measurement of the exact angle. The angle of 112 degrees, which forms the limit between straight and oblique insertion of the ear, is obtained by the position of the line of greatest length of the ear, and a line which passes through the lower orbital margin and the upper margin of the external meatus.

Next we have to consider the whole group of malformations:

Nævi and pigment-spots of the skin, abnormal growth of hair, vitiligo, patches of gray hair, club-foot, polydactyly, defective extension of the end-phalanges of the little finger, congenital luxations, narrow pelvis, tail-position of coccyx, gynæcomastia (development of breasts in the male); further, the whole array of malformations of the sexual organs — phimosis, epispadias, hypospadias, cryptorchism, abnormal smallness of testicles, azoöspemia, aspermia, infantile uterus, atresia of vagina, partial or total redoublication of the vaginal and uterine canal, etc.

Little may be said on the functional deviations (strabismus, nystagmus, unequal innervation of the two sides of the face, tics, etc.). For the developmental irregularities the books of Emminghaus ("Psychosen des Kindesalters") and of Moreau ("La folie chez les enfants"), and also a few publications in the Transactions of the Illinois Child Study Association (published by the Werner Company, in Chicago), will form a first guide. As to the psychical deviations, we should strongly advise the perusal of the books of Koch and Cullerre mentioned above.

It is evident that one of the first conditions of work is excellency

of the tools, of the measuring and recording instruments. Those used by myself were contained in the anthropometric set of Virchow, made by Thamm, in Berlin. They can easily be imported by Eimer & Amend, in New York, or obtained directly from the maker. For other instruments the paper of Dr. Boody will give instructions, and those used in the military departments of this country are described in the article of Albert L. Gihon, on "Physical Measurements," in the "Reference Hand-Book of the Medical Sciences," Vol. V., pp. 667-673. The best guides will further be the little work of Schmidt, quoted above, the anthropology of Topinard and of Ranke.

For American literature, and also on account of several valuable papers on the principles in working out the results, a reprint of "Papers on Anthropometry" will be of use, from the publications of the American Statistical Association, by the American Statistical Association, Boston. (Price, 50 cents.) It contains a very useful list of literature. We also refer to the article "Head," in Hack Tuke's Dictionary of Psychological Medicine.

THE ADVANCEMENT OF PSYCHIATRY IN AMERICA.*

BY EDWARD COWLES, M. D.,
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"The foolish man built his house upon the sand; and the rain descended, and the floods came, and the winds blew and beat upon that house; and it fell."

When we build our houses we try first to lay a firm foundation, and then to raise a good superstructure. After the house is built it must rest for its existence upon a deeper fact to sustain and maintain it. The material house is a perishable thing; the underlying purpose that upholds it and keeps it lasts from generation to generation.

The State builds its hospitals for the sick in like manner, if it builds them well. There must be the material structures before the sick can be sheltered in them. Then, whether or not they are real hospitals rests upon the understanding of the people who maintain and administer them. If personal and "political" interests creep into this essential foundation then it becomes loosened and unstable, and the hospital no longer stands for what it pretends to be. The purity of its purpose and its sacredness to humanity are prostituted; it becomes a scandal to the great cause it was built to aid. The execrations of all honest men should fall upon those who work such evils. They are of the tribe of those who were driven from the temple. It is of such that it is written: "They robbed the helpless of their bread; they stole medicine from the sick." We all join with those who pray that the waters of righteousness may descend, and come to search out the weak, and shift, and unfaithful places in such foundations, and that the wrathful winds of heaven may beat upon such houses.

The advancement of psychiatry in this country is the business of our lives. It is a business so great in importance that it includes the study and use of all things that make for the prevention and cure of insanity, and the best cure of the hopelessly insane. We need to know not only the diseases of the nervous system, but all the diseases of the mind and body, for they contribute to insanity. It is a business that sets our faces to the future; but when we look upon our great task, our first thought must be of the foundations

*Presidential address to the American Medico-Psychological Association, Denver, Colo., June 11, 1895.

upon which we have to build; how shall we add to or uphold the well-wrought results of those who have gone before? The human and the material elements, both good and bad, in these foundations upon which we have to carry on our work, have their instructive history. There are landmarks in our field of labor that, though ancient, can not wisely be removed.

In the limited time at my disposal I can do little more than to examine our foundations, to see if they were laid firmly, and built upon soundly, by the honest and wise workmen among our fathers. When it is said that their work has come to naught, by other well-intentioned men, this is a serious and harmful charge.

In my discussion of the advancement of psychiatry in America the considerations that present themselves in the way I have indicated appear to fall into three divisions: (1) Our hospitals and their management; (2) the relation of psychiatry to general medicine; and (3) the promotion of progress in the hospital treatment of insanity.

I. OUR HOSPITALS AND THEIR MANAGEMENT.

It would be a waste of time to discuss further here the foundations of public hospitals in legislation, and the evils wrought by "practical politics," in debasing institutions for the care of the sick. So long as there are, among legislators, those who say to one another for personal gain, "If you will vote for my measure I will vote for yours," and thus trade on the interests of the sick and suffering, so long will their cause suffer. Every such man never hears the sayings of the truth, or, hearing, "doeth them not." For us, we must, each in his own place, do the best we can for humanity's sake.

Our hospitals themselves are the outcome of the evolution of hospital construction, with gradual adaptation to their special purposes. Our fathers built their hospitals, both general and special, as well as they knew; they were bound, in the construction of all hospitals, until the middle of the century, by the lingering influences of the monastic period. Even the lessons of the great wars that came later have not served to prevent the building of some of the most recent and costly hospitals for general diseases in defiance of the best proven principles. It is fair to say that experienced medical counsel seems to have had little influence in these constructions.

Hospitals for the insane have followed the law of evolution. The development of the segregate plan of arranging buildings has had a steadier and more normal growth; there has been no wave

of extreme change and a tendency to relapse, as in the case of the general hospitals. The block plan of the earlier ones for the insane, in this country, was greatly improved upon by the gradual change to the semi-detached pavilion plan, which was Kirkbride's great contribution to his time. The climax of its use was reached about 1860-'70. In the balancing of indications experience seemed till then to teach the greater and proper economy of rather closely connected buildings. The lessons of the Civil War were practically and wholesomely applied in the introduction of the detached plan. Its economy has been proven, by use, to legislators whose obligations are rightly to be reckoned with, and helpfully, when discharged as wisely and generously as they have been in many instances.

Our earlier hospitals for the insane were placed in or near large cities or towns. Where they have not yet been driven to remoter locations, they remain to encounter increasingly unfavorable restrictions of the freedom of the patients, or the offended public sentiment of even enlightened citizens. Such suburban situations could be held only at an incredible cost, in the actual economies of the existence of such institutions, as compared with an investment of values calculated to be productive of the greatest good. The opinion has been determined by the necessities of the case, that rural locations for large hospitals are the best, when large estates are proven so essential for outdoor life and occupation.

The present method of managing our hospitals is questioned. We may as well at once set down the dictum that the management of a hospital is a business that has to be learned like any other business, by both its executive officers and governing boards. The fundamental principle is that "those are best qualified to conduct a business who are best acquainted with its requirements." Let us turn for a few moments to some historical evidence on this point. The first that I shall cite has a double significance. When Florence Nightingale went to the Crimea in 1854, with her nurses, her superior success was due not altogether to her better knowledge of hospital requirements. She was free to coördinate the forces that produced the results. The medical staff of the English Army had enough of such knowledge to have had better hospitals than they did, but tradition and official formalism tied the hands of the military surgeons by denying them adequate control of that which was truly within their province.

The American war began with like restrictions, but their reform was one of the crowning glories of our profession in the century's

history, and set a model for the world. Who can read unconvinced in the annals of those events* the record of the "liberal course" of our Government and its great results? The medical historian also tells us how, in the first years of the war, the military superstition was broken down that only line officers could command men and perform the duties of executive officers; and how there was developed by medical men an efficient system of hospital service† that proved conclusively the error of the opinion which still prevails too much, that to be a physician somehow disqualifies a man for the business of conducting a hospital.

The medical men of our armies, with no previous training in operations of such magnitude, and coming from the quiet practice of the arts of peace, or young men from the schools, achieved professional distinction; they held efficient control of military commands; they organized and administered extensive supply and transportation departments. There are enough of the men still living who were a part of those great events to bear testimony to their significance. It was the "liberal course" of the Government in the giving of adequate control and holding the officer to full responsibility that brought out the good results. But it would seem that great lessons must be slowly learned by the average mind. It is curious to see, throughout the country, the tardiness of the general hospitals in adopting a principle so plainly demonstrated. A few of these great hospitals have been placed under the administrative charge of medical men; and it is noteworthy that in some of the most successful instances the search for super-

* "Never before in the history of the world was so vast a system of hospitals brought into existence in so short a time. * * * They differed, too, from the hospitals of other nations, in being under the command of medical officers. Instead of placing at the head of establishments intended for the treatment of disease and wounds, officers of the line, who, whatever their other accomplishments, could not be expected to understand the requirements of medical science, and who, with the best intentions in the world, might seriously embarrass the action of the surgeon, as was really the case in the Crimean War, and has been since in the English hospitals, our Government, with a wiser discretion, made the surgeon the commandant of the hospital, and thus, while holding him responsible for the results of its management, put it into his power to do much to make those results favorable. The medical staff can point with pride to the consequences of this liberal course. Never before in the history of the world has the mortality in military hospitals been so small, and never have such establishments so completely escaped from diseases generated within their walls."—*Circular No. 6, War Department, Surgeon-General's Office, p. 152.*

† "The surgeon in charge was entrusted with full and complete military command over the persons and property connected with the hospital. He was held to a corresponding responsibility. At small hospitals the surgeon in charge was his own executive officer, but at large establishments an active and intelligent medical man was detailed to aid him in his supervision. The special duties of the executive officer were those of adjutant to a commanding officer."—*Med. and Surg. History, War of the Rebellion, Part 3, Med. Vol.*

intendents led to the choice of men who were already trained to their business in hospitals for the insane, which are in this regard far in advance of the general hospitals. These have yet to develop an adequate system by which the training of medical officers in junior positions will furnish a corps from which to appoint the future superintendents. The recent adoption of this principle in one of the leading municipal hospitals of this country is the first instance of the kind of which I have any knowledge. In that instance, it is also noteworthy, an eligible candidate for assistant superintendent had earned his appointment by qualifications gained in the service of hospitals for the insane.

The history of the present prevailing method of administration in our special institutions for the insane is really, in itself, conclusive. Can it be possible that we must fight over again the contest of the century for the establishment of the medical government of our hospitals? It was the contest of their emancipation from hideous barbarism, and of the philanthropist and the humane physician, with "good attendants," against the wardens and their "keepers." Let the uninformed read Tuke's History of the Insane in the British Isles, and study the work of the Lunacy Commissions in Great Britain since 1828, to learn the part that was borne through years of discouragement by our profession. Conolly's leadership in England's great reform, we all know. His work on the "Treatment of the Insane," published in 1856, is a book into which he wrote, with the sincerity of his soul, the history of his life's labors accomplished in his thirty years at the great hospital at Hanwell. Who can read his pathetic "Conclusion" and not be moved by the picture he draws of badly organized asylums? He wrote of experiences in which, "above all, the heart of the superior officer must be discomposed and saddened."

Every critic of the present system of hospital management, every doubting friend of the insane, should read Conolly's estimation of medical men in these relations as they were known to him by their works. "Considering the various education of men of different professions and ranks, none would seem so likely to be fitted by their diversified studies, and by the practical application of them to the preservation of the health of men and women, to undertake the mental, physical, and moral government of lunatics and lunatic asylums, as medical men. Their various knowledge; their practiced observation of the effects of bodily diseases; their constant intimacy with the modifications of both physical and men-

tal phenomena in all the accidents of life; and the very nature of their daily occupations, by which the best human feelings and sympathies are almost necessarily called into exercise, must generally be supposed to impart qualifications to them which are rarely possessed to the same extent by men in any of the other walks of life." He found these qualities illustrated in a high degree "among the medical superintendents of the last sixteen years (1840 to 1856), and particularly since the dawn of what may be termed the mental government of the insane."

Many of you have read his closing words, but they are so much to the present purpose for others to hear that they should be quoted: "My personal interest in such matters has ceased. The wildest resolutions of committees* can affect me no more. But knowing too well what rash experiments may be made by committees, * * * I can not refrain from recording my opinion, founded on long observation, that the proper treatment and the welfare and happiness of the insane is insecure under governing bodies constituted as those of asylums now generally are. Full security might, however, be given to the public, and every advantage of the insane surely preserved, if the control of asylums was always entrusted to intelligent superintending physicians, acting under the general inspection of a board or committee qualified for such *superintendence* * * * who would entertain no apprehension of evil from delegating such full authority to the physician as would leave him at liberty to carry out comprehensive plans, according to principles admitted and approved by them, and at the same time possessed of authority empowering him to enforce conformity to his measures among all other officers. Thus, and thus only, I believe, might be established and maintained a consistent plan of asylum government, advantageous and humane in relation to the patients, encouraging to all the officers of such establishments, and just to the community at large."

In our own country there are those among us who remember the lingering examples of institutions with divided authority, and the consequent heart-breaking difficulties; and they know the peacefulness and efficiency that came from the changes to medical control brought about by the logic of experience. Can we not name the names of good and able men who were defeated in the noblest aims in conflicts with non-professional dictators? It is noteworthy that the reversals, in some modern instances, to the old system so

*Governing boards.

stamped with condemnation have been made by men new to hospital government, who, in their discontent with individuals, and defiant of recorded experience, rush to the illogical extreme of changing at the same time both the *personnel* and the *system* of the institution in their keeping. That experiments in divided authority may appear to work well for a time proves nothing; it is a cause for wonder that the constantly occurring evidence to the contrary can be so ignored. We have no assurance that the division of control between a medical director and a warden will lead to more productive scientific work in a hospital. There must be a line of union somewhere between the closely related medical and executive operations of a great hospital. Such an institution is a mechanism which obeys the law that efficiency goes with reduction of friction. Harmony is the perfected result of an efficient administration; the logical basis of harmony is unity of control in all business organizations. If the facts of experience give the right to anyone to speak as having authority, it should be declared as beyond question that a properly organized system, under unified control, carries itself along with a degree of ease that no other method can obtain. Instead of spending his time and strength and fretting his soul with fussy details to avoid friction with a coördinate authority under the same roof, or leaving things undone that ought to be done, a chief executive with experience gained by time and training, and duly empowered, will make the various elements of his household fit together in a harmonious whole.

It is simply a matter of organization. Let the lesson of the great military hospitals be followed. In a large asylum a "liberal course" on the part of its governors would soon prove that no more productive investment of public funds could be made than in strengthening the executive head of the institution. If more professional work is wanted of him and he needs more time for it, let him divide both the executive and medical duties with an executive officer—an "adjutant"—as it was done in the general hospitals of the Civil War. Members of governing boards should put the kind of common sense into their hospital direction that they do into the business of their corporations, and employ trained men, and train others to competency for the work that they ought to do.

The truth of it is, if we search for a general principle, that everything in a hospital is medical, and is administered for a medical purpose. There is one end to which all things contribute. In the first place a hospital household is an organized social unit; as a

family of men and women, young and middle-aged, it should be under a controlling head, *in loco parentis*. The hospital is the home for those who live in it, and their lives, liberties, and happiness are largely in the hands of the controlling authority, for order must reign. It is a household organized to do business where the people live. The moral, ethical, and business atmosphere of the place must be calm and wholesome in its influence upon the sick and insane; this is healing alike with the aseptic conditions of a surgical ward. It is bad construction not to have the material supports of an edifice well "bonded" throughout; there should be no lines of cleavage ready formed, where it tends to split apart when the inevitable strain shall come. It is equally repugnant to social as well as mechanical law, that a domestic organism should be constructed without the common bond of unified control. In a large hospital for the insane, even the kitchen, laundry, shops, and farm are places for the treatment of patients by occupation. The conduct of these essential parts of a great institution should be inspired by a controlling medical spirit.

A military hospital established with a comparative permanence is the easiest to manage; there are only men in it, and the daily and nightly rounds of duties are done by soldiers, who obey orders. There is no home, and little sentiment is essential in such a hospital. In a general hospital the domestic sentiments enter with the home life of the people when "off duty;" some must be protected and others controlled. The management is more difficult by the multiplication of details arising from a rapid movement of the hospital population, and the adjustment of the complex relations with a large visiting staff, with whom, although one way is often as good as another, each wants his own. The patients, however, being mentally well, are expected to voluntarily obey the rules. Still a medical government best coördinates all these elements. In hospitals like ours the executive demands are much less exacting, by as much as the life and business are more regular; a well-ordered system may leave the executive head large freedom for giving time to the supervision of the "mental government," as the purpose of the whole régime. The patients here are most dependent upon the parental element in the social order; the medical superintendent represents the authority that applies the required restraint, and the more paternal this can be the better. Conolly's idea of "mental government" was right. The moral and disciplinary effects of a well-conducted institution have their most

effective medical uses. I once heard the lamented Goldsmith quote a saying of his neighbor at Danvers — the poet Whittier — “an institution is the shadow of a man.” This could never be more truly said than of Whittier’s neighboring hospital, where he must have observed that it is the spreading of the influence of its head throughout such a household that makes it one with him. That was what Conolly saw in the new order of “medical superintendents,” in “the dawn of the mental government of the insane.” This makes the title a term of honor for all time. If any think it can not be borne by a medical man without loss of dignity, let him read the lives of Conolly and of many other conscientious and able men who, since his time, have worked out for themselves the same conclusions. There are generally reasons for things. And when principles, struck out by such men, have made their way for half a century until they prevail, they are not to be treated lightly. Conolly’s “mental government” meant medical government. A “medical superintendent” may combine the several dignities of “medical officer,” a “medical inspector,” “medical examiner,” and other allied professional and business offices. I never heard it denied to any specialist in medicine that he might manage, without loss of professional caste, his own *res angustæ domi*, or a private hospital for his personal profit.

A medical officer such as I have described, trained and promoted through the various grades of junior positions, most certainly acquires the assured capacity which alone is to be relied upon for the best results. Such a medical executive, thus trained by professional and executive experience peculiar to a hospital, becomes the one who can most effectively and easily use this hospital as a perfected instrument which he can fully grasp and wield. It is the combining and coördinating faculty that must be had, and this is as much a part of the essential foundation as the material hospital is requisite as a shelter before any patient can be well treated in it.

Let us suppose that a medical man has acquired these abilities, favored by having the requisite time and experience to make his hospital successful. Is it essential that he should have kept pace personally in his acquirements with the various special departments of medical science that might be brought into the work of his hospital? The president of a university may be a learned orientalist, an adept in biological research, or an expert in the new electrical science. Who demands that the head of a faculty of arts and sciences shall be a master of all these? In the medical department

alone general medicine, as an applied science, now demands the expert contributions of the pathologist, chemist, neurologist, and bacteriologist for completeness of work in any hospital. All these and more must be included in the scope of the trained executive of a hospital for the insane, where an experienced alienist finds his largest place. Which of these specialists can best compass the work of all the rest? The trained executive is the foundation of the whole matter, and the day is to come when, as a medical specialist, he will rank with the honor due his usefulness. If this seems a modest aim for a physician, let it be remembered that there are places in professional as in business and social life, in which the men who are demanded to make the best contributions to the common weal are those who have it in them to be the cause of good in others. But the man who is well grounded in general medicine is the better physician when he has "business sense," which means — when he has a logical mind. With this, and training and experience being given, the requirements are furnished for best organizing a medical business. Here we get the true view of our present point of departure for advancement; there are many, and there might be more, medical executives of our hospitals who have risen to their places of trust, as men do in other business, because they have the power of "combination." Knowing the elements of their medical work they are the very ones to organize it. Like the college president, who, by a combination of skilled teachers, becomes the cause of learning beyond his own, so the skilled medical executive is the man to organize the means and inspire a medical staff with the zeal that begets competency and good work.* Therefore, it is now that our time has developed so many medical superintendents who are skilled executives, that with their opportunity comes the obligation to enter upon the newly opened fields for the organized investigation of our problems, which are of so much concern to human life and happiness.

The opportunity and obligation of governing boards come also here. But it requires a very intelligent and very practical business sense — that is somewhat rare in the controlling authorities of our hospitals — to understand that some of the most productive scien-

* Dr. Wise, commending his practice of holding a daily conference with his assistant physicians, forcibly says, for all of us: "It is not common for a superintendent to find that an assistant has outstripped him in scientific attainments, and that Gamaliel can properly sit at the feet of Paul. This should not be a matter for regret."—"Medical work in Hospital Wards," *AMER. JOURN. INSANITY*, July, 1895.) We must all agree with his meaning, that it should not be otherwise in a well-ordered hospital which has growth in it.

tific work is not to be tested by an immediate demonstration of the question: "What's the good of it?" It is the most practical mind that best appreciates the true relation of necessary causes to effects, when these are remote, in matters on the boundaries of knowledge for the most acute professionally trained minds. It is often the wisest superintendent who sees the futility of trying to do what can not be done. It too often takes long years to educate people, legislators, governors, and trustees to the consenting stage; and when the medical superintendent knows that his executive life is likely to be short, the possibility of professional attainment offers little to inspire his zeal, and it is thus that he grows to be a man who must be content with making ends meet between appropriations and *per capita* cost, instead of making these elements serve the larger purpose.

In the more enlightened States it is one of the most inspiring signs of the times that in the last few years so many of our hospitals, and the younger men in them, are being stirred by the doing of new things in the advancement of clinical work. It is here that the governing boards ought to see the worth of a "liberal course," and should provide the means, which are relatively so moderate, and give the stability of support that is required.

A wise observer of men and things recently said to me: "Man progresses on diagonal lines; in trying to strike a right line he pushes off on either side. It is like the skater; he gets on, but in his efforts to reach the true mean he goes to the right and left. The reformer is always pushing off *from* something; the idealist continually strives to *go to* something." This suggests to me the thought that when a good man, in his discontent with things as they are, tries to change them, he is accorded the rôle of a reformer. He is a safe man to follow when his reforming is well informed. Conolly was a safe man for a leader, because he knew his cause from the inside. When a bad man assumes the rôle of a reformer it is likely to be for base ends; he may profit by the laxity of old conditions or new looseness. He is a reactionist. But the reformer who only knows his cause from the outside is in danger of doing harm in his good intent. Like the skater in unfamiliar places he may "push off" too far. Such "reformers" do more damage than the reactionists; indeed they are the more dangerous; by as much as they are known to know many things people are apt to think they know all things. It is the commonest thing in life for many people, who are bound to have some change, and speedily, to hurt

the cause they wish to serve. In our great work it is the safest and surest to prove all things and hold fast that which is good. The mother of reform is discontent; but among her many children, good and bad, the best of all is improvement. Let us foster a wholesome discontent and have advancement by all means, but let it be true reform, if need be, and not such revolution as means reversal to things obsolete. One of the morals to be drawn from this is, that when reforming is needed in our work it is for us to do it.

In recent discussions of the proper place and function of the alienist as a hospital physician, there has been a subtle intimation that his desire to establish a medical government, and to have "control," is somehow to his discredit. The implication seems to be that he is "a jack at all trades and good at none;" or he is

"At once a cook and a captain bold,
And the mate of the Nancy brig."

The case of the *soi disant* captain in the ballad was a peculiar one, but he survived his perils, and, though he had but one story to tell, let us hope our fate will not be less fortunate.

II. THE RELATION OF PSYCHIATRY TO GENERAL MEDICINE.

The position of the alienist in his relation to general medicine has a most interesting history. He was in the beginning of the modern science of mental medicine, a hundred years ago, always a general physician; it is really true that he has been so ever since. Surgery, long set apart as a somewhat special department of medical science, has a comparatively limited field. An eminent surgical writer* says that "the charm of surgery is because it is visible, and tangible, and demonstrable"; its brilliant modern triumphs make it most attractive. With its "external pathology" it is "still to some degree uncertain, but not nearly as much as medicine." "I think," he says, "there is no doubt that medicine requires a higher grade of intellect and more judgment than the practice of surgery." Most of the modern specialties, so-called, are subdivisions, and sometimes refinements, of surgery in their methods of examination and treatment. Psychiatry, however, so far as it is a specialty, is closely allied to general medicine; it finds its etiology in all bodily diseases. There has been a mistaken tendency on the part of ourselves and others to include psychiatry wholly in the new science of neurology. The alienist, it is true, has to do directly with mental symptoms, disorders of brain function, and, therefore, of the

* Cheever, "Lectures on Surgery," p. 2.

nervous system, and this goes to all parts of the body. But it is the same for the general physician; he deals commonly with mental symptoms in all forms of febrile delirium, for example, and is more or less of a practical psychologist in the whole range of his art. The alienist, as a psychologist, is a general physician who is a student of neurology, and uses its anatomy and physiology; but he does a great deal more, for he must include all the bodily organs. He must study all the functions of nutrition and excretion. He is being aided by the more promising contributions from organic chemistry; and bacteriology, in the wonderful advancement it is bringing to the whole science of medicine, is explaining the analogy between the toxic influences produced without our bodies and those within them. Not only do bacterial products poison us, but those of our own vital processes that are toxic in conditions of disordered function and in disease, are also the more or less direct causes of mental symptoms. Thus it is that psychiatry is shown, more than ever before, to be dependent upon general medicine. The best definition of insanity is that it is a symptom of bodily disease; in its initial, acute, and curable forms it is a condition due to nutritional changes until consequent damage accrues to the nervous system and the mental organ itself. It is later that we reach the pathology of the neurologist, for in the order of the symptomatology of nervous lesions the general physician and the alienist come first, when the causes are not traumatic, or other forms of surgical disease.

Neurology, in the practice of the modern specialist, had at first a comparatively limited field. Among the newest of the special branches of medicine, its achievements have been brilliant. One of the earliest of these which, in this country, had so great an influence in establishing neurology on its present basis as a clinical science, was the remarkable study in the wards of the military hospital of the effects of nerve injuries caused by gunshot wounds observed in soldiers of our Civil War.*

The methods of neurology have been distinctly anatomical, and the force of its scientific research has been largely directed to the localization of the lesions of the nervous system by carefully comparing observed symptoms with pathological findings. These methods have yielded such exactness of results in diagnosis, that like precision has been demanded in all lines of clinical inquiry

* Mitchell, Morehouse, and Keen, 1864; and S. Weir Mitchell, "Injuries of Nerves and their Consequences," 1872.

relating to the nervous system and assumed to be neurological. Out of this there grew the disposition to reproach the alienist, as if he held only a limited place in neurology, for not having demonstrated to an equal degree pathological findings to account for all morbid mental phenomena. With the reinforcement of the early promises of the new experimental psychology, which first addressed itself to the more mechanical lines of inquiry, it became still more the fashion, a few years ago, to regard the alienist as a specialist in neurology and nothing more. Psychiatry has been charged with being slow in its progress, as having no coherent principles, resting upon an indeterminate basis in anatomy, physiology, or pathology, and, therefore, as being unscientific in its classification and therapeutics. But Krafft-Ebing, in noting this fact, claims the establishment of "Psychiatry as a Clinical Science," and says that the results offered by pathological anatomy are for the most part negative, and the few positive ones not surely indicative of their genesis, and worthless for the explanation of the disturbance of function known to have existed. Then psychiatry, he says, seems almost exclusively dependent on itself, and is limited to the direct observation of psycho-pathological phenomena, and from the empirical valuation of these is obliged to draw conclusions as to the kind and degree of the functional disturbance of the psychical organ. These psychopathic phenomena are, however, no mathematical quantities, no physical phenomena, nor even chemical secretions, but are phenomena of a peculiar kind, being the so-called feelings, ideas, and will-impulses. The course of the psychoses are discovered through observation as in any other disease. Psychiatry, now raised to the value of a clinical science, must be studied by its own methods. He says, "it is more than a specialty, and a necessary complement of medical study, inasmuch as man is not simply an eating, breathing, and feeling machine, but a spiritual personality, whose psychical functions are intimately bound up with his somatic, morbid processes."*

An American philosopher† shows that "each of the real and concrete forms of existence which are known to man, boundless as their number and variety may appear, falls nevertheless under one or another of three great types of real being, viz., the machine, the organism, and the person." The surgical specialists and the neurologists have been mainly studying the human being as a self-

* Wiener Klinische Wochenschrift, October 24, 1889.

† Abbot, "The Way Out of Agnosticism," p. 54.

making and self-working natural machine. These specialists have called to their aid anatomy, physiology, and pathology in their examinations of the organism which, when out of order, they try to mend. The general physician must go farther in his dealings with the organism while using the same aids; he finds that in treating the disorders of the personal man, he has constantly to reckon with him as also a rational being, whose organic machine is his instrument; and so far every such physician is a practical psychologist. But the alienist as a general physician is especially concerned, in his wider field, with the whole man, for psychiatry deals with the mind of the man and must seek for causes of its disorders in the whole man.

I have said that the methods and field of neurology in medicine have been distinctly anatomical. It is another of the interesting signs of progress in our whole science that the neurologists are finding the need of psychology to explain their problems, and are being led thereby into a better comprehension of psychiatry. In any assemblage of "neurological" papers it is now noteworthy that while the major part of their titles have an anatomical or surgical bearing, a fair proportion will be upon mental subjects. While many of the writers are alienists, yet there have been neurologists who, from the beginnings of their science, have recognized the presence of the psychical element, though much as the general physician has done. The importance of this element as modifying and even causing nervous symptoms is now being more correctly estimated. No more significant indication can be noted as an example than the clearer recognition, within a very few years, of the true nature of hysteria and its alliance with neurasthenia, through the remarkable elucidations of Charcot and his school, and by Loewenfeld, Pierre Janet, and others. Great difficulties are being solved by the growing knowledge of the fact that underlying all nervous and mental phenomena there is a range of subtle changes in the conditions of the organism that are common ground for the alienist and neurologist. The bond between them may prove to be the still newer science of physiological psychology, wherein may be found a rational basis for an understanding of the relatively intangible mental observations and the beginnings of the grosser changes whose study has given a marked character to the work of the neurologists. The importance of this is shown in the broadening of the view of neurasthenia as being, in certain forms, either a disease by itself, a condition underlying many other nervous diseases, or

the true characterization of a chronic condition, whether acquired or hereditary.

We read in the writings of eminent neurologists, discussions of such subjects as "Association Neuroses; Neurasthenia and Allied Forms of Neuro-mimesis," by Prince*; and "Remarks on the Psychological Treatment of Neurasthenia," by Putnam.† The work of Bouchard and others in pathological chemistry, and the revelations of bacteriology concerning the effects of infectious and toxic influences, have made contributions to general medicine that have been applied by the French alienists to the study of insanity. Our American neurologist, Mills, has written on "The Relation of Mental Disorders to Infectious Disease," ‡ and Putnam,§ on "The Relation of Infectious Diseases to Diseases of the Nervous System."

When Van Deusen, in 1868, published his ideas of neurasthenia in advance of Beard, he had a much broader and truer conception of the conditions that underlie mental as well as nervous diseases. It is the alienists who have developed this conception, and who have brought out the present understanding of the relation of chemical and toxic processes to mental diseases. In a recent address on the "Causation of Nervous Disease,"|| by Starr, are summed up the results of our present knowledge of the changes in the chemical and physical condition of the neuron, showing that the essential lesion in functional and organic diseases may be produced by overwork, by imperfect nutrition, or by active poisoning, from active toxic agents produced within the body, or from those of an organic or inorganic type received from without. Thus has general medicine contributed both to neurology and psychiatry, through the principles discovered by bacteriology, an explanation of clinical phenomena long recognized by alienists who first anticipated the true conception of mental disorders as finding their most prolific cause in conditions of nervous fatigue and exhaustion.

These are valuable essays in the domain of psycho-pathology or in close relation to it; but psychiatry has much to give to, as well as to take from, neurological medicine. It should be kept in mind that if psychiatry is neurology it embraces a far wider range of disordered conditions from diseases of the body than are noted in

* Jour. of Nerv. and Ment. Diseases. May, 1891.

† Bost. Med. and Surg. Jour. May, 1895.

‡ Am. Jour. Med. Sci. 1894.

§ Am. Jour. Med. Sci. 1895.

|| Western Reserve Med. Jour. May, 1895.

the manuals of nervous diseases, although these, latterly, enumerate and treat upon, though meagerly, the diseases of the mind. But neurology, although still notably deficient in therapeutics, demands of psychiatry a greater ratio of "recoveries" from insanity than has been shown, apparently forgetful that a large proportion of the patients who have other diseases never get quite well at the best, and still may return to their homes and business, as the uncured insane can not do.

The question of the large contributions that may be made by neurological medicine to psychiatry is one that will bear examination. The advances in histology are so marvelous and rapid that the student of five years ago must now recast his knowledge and conceptions of the physiology and pathology of the nervous system. The alienist has his aid direct from this new knowledge, but welcomes eagerly the "deductions" of all careful observers. But if such deductions from anatomical neurology sometimes take the form of authoritative and instructive dicta, concerning, for example, "the effects due to an exaggeration of the unknown ganglionic or other alterations, without demonstrable lesion," we may be pardoned if we do not take for guides our most agreeable counselors and friends.

In the relation of psychiatry to other departments of medicine the alienist has had to encounter the criticism that he has not been productive of scientific work. We have seen that in its very nature it has not, even yet, the objective character in its pathology that makes it demonstrable by mechanical methods. In the work of the alienist the century has been an age of construction—of laying foundations and building shelters, and thus largely of providing for the more material care of the insane. The problems of this kind to be solved have been difficult and often overwhelming. That the work has been done by medical men better than it could have been done by anybody else is beyond question. If, in their annual reports, the record of their labors is read in an appreciative spirit, one could not fail to be moved to sympathy by the pathetic history. As an example of this I had recently the privilege of hearing an account, written by Dr. Babcock of the South Carolina Asylum, of the efforts made in the last forty years to provide for the colored insane. It was the work of men among whose names are those of Stribling of Virginia, Green of Georgia, Tyler of South Carolina, and Compton of Mississippi. The mention of them awakens memories of a generation at once honored and honoring

that has now passed away. The humane purpose that was sustained through years of discouragement, and the arguments presented in appeals to legislatures, too often futile, betray a degree of foresight, wisdom, and devotion that commands respect. These were scientific labors in the worthiest of the professional and social obligations of enlightened men. In these and kindred efforts the experienced alienists have become conservative as well as painstaking; no brilliant discovery is possible for them, to inspire their zeal with an exhilarating freshness, and they have long been learning to refrain from the voluminous publication of conjectures and deductions concerning the unknown and undemonstrable. There is something to be said also of the perennial proneness of us all to regard everything foreign "*pro magnifico*." When we are asked why the results of the new science of physiological psychology are not being applied to the elucidation of psychiatry in this country, the following abstract of recent comments, by a German writer,* is a sufficient answer.

Very few alienists in any country have gone carefully into the question of experimental psychology or have made experiments themselves. Buccola, in Italy, more than a decade ago, attempted to apply the psychological measuring of reaction time to pathological cases; but, owing to his early death, this and the work of a few followers soon stopped. Later some Russian psychiatrists, partly influenced by Wundt, attempted the experimental investigation of pathological mental conditions; and quite recently, in America, the attention of some of the younger psychiatrists is awakened to the new psychological methods. But up to the present day, Kraepelin is the only German alienist who has attempted to study the particulars of psychological experiments, by working himself in a laboratory. It is very significant that, in this unique instance, Kraepelin, whose training was with Wundt, has felt compelled to spend some years of preparation in devising special psychological methods before any could be made applicable to the peculiar psychical processes of the insane.

That there is something to come out of this pathological mystery is not to be doubted. Kraepelin, with his painstaking caution, is bringing out promising indications for the better estimation of mental symptoms by their analysis upon a psychological basis, through the application of certain methods entirely new with him.

* Kraepelin: *Der psychologische Versuch in der Psychiatrie. Psychologische Arbeiten*, Leipzig, 1895.

His fine elucidations of the "exhaustion psychoses" represent, however, the results of a kind of clinical study to which contemporary workers in other countries have addressed themselves; and there have been those who, within the last decade, have initiated laboratory work upon like problems in different ways. To demand results at this stage of progress is calling for the fruit of the tree before it is grown. Neither are we without the promise of scientific advancement in the direction of "pathological findings," in the work of members of our association of alienists. The difficult character of our problems forbids any trivial treatment of the labors bestowed upon them, and certainly exuberance of critical judgment is untimely now that the trend of inquiry has changed so much the data of general medicine, in which the alienists have always found their rightful field. In common fairness the question should first be answered: From what sources, other than the alienists and their hospitals, have come any real contributions to the study of mental disorders in relation to their physical causes?

It should not fail to be mentioned here that there is a most encouraging indication in the work of our hospitals, which allies it with the methods of the general hospitals. Ten years ago there were only two organized schools, then newly established, for the training of nurses in hospitals for the insane. In 1892 there were twenty-four such schools in operation in this country. This year there are thirty-eight of these schools in American hospitals, that have yielded a total of 896 nurses, including men and women, qualified by being instructed in their special work. In a number of other hospitals the establishment of the new system in the nursing service is already begun.

Considering the opposition to this movement in certain quarters, the difficulties in others, and the remarkable failure in some instances to recognize the absolute need of training and experience in such general nursing as may be required in asylums as the first principle of success, it leaves little room for complaint that advancement is not being made in this important particular.

III. THE PROMOTION OF PROGRESS IN THE HOSPITAL TREATMENT OF INSANITY.

This discussion of the advancement of psychiatry has been limited, so far, to a study of our present "foundations." In pursuance of my argument I have endeavored only to characterize, in general terms, the way in which we are really trying to do our work,

—the plan upon which we must expect to build. In the first place we have our hospitals as they are; let us do the best we can with them. It is a maxim in the conduct of hospitals that a bad hospital can be made a good one by good keeping. To men who have learned the business of keeping a hospital, and practiced the art of conducting an institution that should be well organized if business success is to be hoped for, there is no need of assuming to give instruction. The problems relating to hospital economies, the material comfort of the patients, and the curative effects of occupation, etc., are all familiar to you. I may be allowed, however, to say a few words in regard to an ideal hospital organization with respect to its clinical and scientific work. If one were an autocrat, and such a thing were conceivable as being the controlling adviser of a hospital corporation, board of governors, and all concerned, it is easy to say what one should do. My ideal hospital should have the best executive and medical staff that the purse could support, of which I held the strings. The principles should be that no part of the investment in a business is so profitable as that which procures educated and skillful direction. The chief executive should be a man trained to his business and of proven capacity for that particular business, so that with proper assistance his purely executive duties should be to him simply incidental to the use of the hospital as an instrument applied to its intended purpose. The business office of the hospital should be in charge of a competent man, who, as a clerk and cashier of the hospital, with proper assistance in the bookkeeping, would act as "adjutant" to the superintendent; as such he would prepare and coördinate all the executive office details, but have no executive authority himself. The present office of steward should become that of a purveyor, who, as "commissary" and "quartermaster," would be the buyer of supplies as for a commercial house; he would have charge of these and the oversight of the farm, etc., but he should have no handling of money or keeping of the financial accounts, which belong to the treasurer's office. Then the maintaining of all proper checks upon the purely business operations would be done by the "adjutant," for the superintendent, who could keep himself duly informed without the routine labor of applying the checks himself, as he may do, however, at will. The superintendent should be well educated in general medicine, so that the medical government of the hospital, and the "mental government" of all within it, should have a basis of the broadest understanding.

The clinical assistants should have perfected their education by hospital training or successful practice in general medicine; and they should be chosen by the superintendent by nomination to the governing board, and he should be responsible for their efficiency. The senior officer should systematically share in the "medical government" of the hospital in all particulars for the sake of perfecting his training. There should be a woman for an assistant physician in a large hospital, or a consultant in gynecology, and consultants in other specialities, to be called when needful, as the physician calls them in general practice. There should be an accomplished resident neurologist on the staff, or a physician especially educated in neurology—not for a chief of staff, because his views would need the broadening and adjusting that would mutually come by contact with the physicians of the staff experienced in general medicine, and by the discussion of clinical problems in the regular meetings of the hospital medical society. Thus I should expect all of the medical staff to become, by and by, practical neurologists as well as psychiatrists. Later, in the natural evolution of things, there might be a neurologist for chief executive, when he had learned also the incidental business of management; he would have become, by that time, also a general physician, as an indispensable requisite, and as a practical result of medical work so conducted. The newly appointed neurologist should have some clinical duties, even though limited, from the first, if in no other way, at least by taking the places of the regular clinical assistants in a system of giving "a day off" to each every other week. Such an organization provides for an effective division of labor that relieves the clinical assistants from the routine of keeping case records, etc., which may be better done by those whose time is less valuable. Thus, more attention can be given by them to the patients themselves, and to the important necessity of keeping informed in the literature of the subject.

The laboratory should be in charge of the neurological assistant, because he is supposed to be well informed in nervous pathology. But the pathological work should be conducted on the principle that the pathology of insanity begins before the insanity does, and that post-mortem pathology includes but a small, though essential, part of the requirements. Therefore, the laboratory should be a place for the study of physiological psychology. This would cover the study of the initial conditions which lead to mental disorder, and promote the possible determination of the nature and causes of

departures from normal mental function. Moreover, in the dependence of their changes upon general physiological processes, and in order to take into account all the elements of vital activity involved, it would be supremely necessary to study both physiological and pathological chemistry in their direct and indirect relations to mental changes. This includes the effects of fatigue and its relation to exhaustion and auto-intoxication. For these reasons it would be desirable that the director of the laboratory should have an assistant especially accomplished in chemistry. There should be, as in general hospitals, a service of medical internes, or clinical clerks, as junior assistants, who should write the records of cases, etc.; their business being the study of medicine, it would bring in the principle that, in their instruction, he who teaches learns. I would make all the medical staff teachers in some way; the training of nurses helps to do that. Then there should be a school, the teaching in which can be well done and still become so far incidental to the general duties as to add little to the labors of the staff. Such a school can be so conducted as to affect little the cost of the nursing service; in fact the law of compensation works in all these matters. It is a matter of the organization of a business; whatever is good to do, is good all round — every good thing helps every other good thing, and the sum total is the greatest good. The success of such a business is a medical success, and the accomplishment of the results attainable in any large hospital by a well-sustained medical government is a success worthy, in the highest degree, of a physician.

My thesis is that the advancement of psychiatry in America must start from sound foundations; it is the chief business of our lives, and its conditions may be summed up in the following propositions:

1. Our hospitals should be conducted under medical government, as they are instituted for a medical business. They should be conducted by their governing authorities in such a way as to promote the professional efficiency of the medical executive staff; this implies the choice of such officers solely for their fitness, and that fitness is enhanced by experience, which goes with the stability of their work. It implies also a liberal equipment of the literature and appliances which are the well-recognized essentials of scientific professional work everywhere. The manner of life of these officers should put them on an equal plane as to compensation, with successful men of like capacity and attainments engaged in other branches of medicine.

2. The tendency in all departments of medicine and surgery has been toward limitation in specialties; this should be counteracted in our work in all possible ways that promote the broadening of the fitness of medical officers by affording better conditions for their education in general medicine while in the service of the institution, and by encouraging special neurological and psychological studies. Thus there should be a close union with all that pertains to neurology, and then advancement should be sought along the lines of a common alliance with general medicine under the law which Herbert Spencer calls the tendency to integration of all the present specialties in medical science. It is this tendency that, notably at the present time, is being strongly reinforced by the great developments in biology.

3. While it should be our aim to be general physicians in order that we may draw our aid from the whole domain of our science in our somewhat special work, we should draw also upon the newest knowledge of psychology. Thus our special mission becomes the study of the highest and the most difficult problems of human life in the preservation and restoration of mental health, and the sanity of that life.

Members of the Association: In this, the aim of your high calling, if you be but faithful you may rest upon the facts of your peculiar experiences, and as you lift your cause from stage to stage neither adversity nor any misapprehension of your good purposes, nor any evil thing, can rob the world or you of the blessings that in the end will flow from the devoted work of those who love their fellow men.

KRAEPELIN ON PSYCHOLOGICAL EXPERIMENTATION IN PSYCHIATRY.

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During the first half of this year an article appeared by Kraepelin, in which this author gives a summary of some of his work in psychiatry, of his efforts to make "the psychological experiment" applicable to psychiatry. Owing to the importance of this subject, a short review may be of interest to the alienists of this country. Perhaps a few preliminary remarks, however, will help to put the work in its proper light, and will show the standpoint from which the author views the study of mental diseases.

It is well known that for many years anatomical studies have taken a prominent place in investigations by those who deal with mental diseases, a fact which, from the history of psychiatry and medicine in general, is easily explained. These studies, with which many illustrious names are intimately associated, have brought forth many brilliant results; at the same time normal anatomy of the nervous system and the study of nervous diseases have derived the greatest benefit from these efforts, while the share which fell to psychiatry is, after all, very small. A knowledge of the anatomical relations of the nervous system, however, and an inquiry into the structural alterations, are absolutely necessary for a scientific study of mental diseases. But it is certainly a mistake to think, as many apparently do, that with this the work could be done; that the task of psychiatry lies solely in a pathology of the brain cortex, for we must certainly admit with Kraepelin that a pathology of the brain cortex, no matter how far advanced it may be, will never give us an insight into abnormal mental phenomena as such. As he says, in the introduction to his excellent text-book: "This would only be possible if the brain secreted ideas and emotions as the kidney secretes urine;" or, in other words, if an exact knowledge of the cerebral mechanism should include also a knowledge of psychical processes. "But nobody will deny," he continues, "that we could have a comprehensive knowledge of the finest molecular processes of the brain without having the remotest idea that we have before us the organ of psychical life. This is fundamentally different from the materialistic views which we find more or less con-

sciously expressed in many text-books and articles, even of the present day," in this and in other countries. In regard to the dependence of the psychical on the physical we know nothing more than that a relation exists, and a correlation of the two parallel lines, the abnormal mental phenomena and the anatomical (or chemical) changes, must, of course, be the final aim of a scientific study of mental diseases. That, in spite of many theories, the actual steps in this direction are very few, nothing shows better than the diversity of these theories. It follows, therefore, that it is necessary to approach the subject from two points of view, *with equally accurate methods*, namely, from the somatic and the psychical; and certainly mental diseases have primarily a psychical side to them, and it is by a study of their psychology that we have, above all, a chance to arrive at an understanding of the relations of mental symptoms among each other, and of their genesis, and to trace back complicated to more fundamental phenomena. But the advance of psychology has been rather neglected by alienists, in spite of the fact that the last decade has brought this study into line with the natural sciences. This circumstance, as well as the scarcity of actual facts, and frequently a leaning to a one-sided anatomical conception, have brought forth innumerable theories, so that no field of medicine is so full of hypotheses as psychiatry. The need of a sound psychological basis, therefore, and the need of having reliable methods, as in the other branches of natural science, which allow us to go deeper than simple observation can go, have led Kraepelin to make use of experiments which, thanks to the work of men like Ernst, Heinrich, Weber, Fechner, and particularly Wundt, have proved so valuable in normal psychology.

It is well in this connection to quote from the last paragraph of the article we are about to review, where Kraepelin says that it is time that, instead of indulging in deep speculations and ingenious inventions, we should go to work at a serious and conscientious investigation, advancing step by step; that we need facts and not theories, which latter have only a right to exist inasmuch as they allow of the formulation of problems, giving thus a starting point for the application of accurate methods to new investigations.

In what manner such work may be begun, what are some of the problems which can be formulated, what has already been achieved, how much preparatory work is necessary, and, finally, from what different aspects experiments may be made valuable for the difficult study of mental diseases — all this forms the contents of

the article which is entitled: "Der psychologische Versuch in der Psychiatrie.*" It forms the introduction to a series of publications to be issued at irregular intervals, in which Kraepelin wishes to put on record the studies done in his laboratory in the field indicated in the above title.

Before Kraepelin others have entered this field of work and have made some experiments of this kind, but nevertheless it is he who must be considered the first one who followed this line of study with a definite aim and with a logical sequence. He not only applied methods which were used in experimental psychology, but devised new ones particularly fitted for the investigation of abnormal conditions; and it is well to say at the beginning of this review that the objections which could be made to a study of this kind—namely, that experimental psychology is itself not enough advanced to be applied, and that it is questionable whether the methods there used are applicable to abnormal individuals—do not hold good, since Kraepelin takes the methods less from physiological psychology than the experimental method in general.

Besides the valuable aid which Kraepelin expects, and has in part already obtained, from the study of normal individuals with reference to pathological conditions, he hopes by experimentally investigating the latter to arrive at an analysis of mental diseases which is more accurate and complete than could be gained by simple observation, and it is significant of the manner in which the work has been done that many years (since 1883) were spent chiefly in studying normal, or artificially produced abnormal, conditions, in order to test the method, and to lay a foundation before investigating pathological conditions. This is, after all, the only proper manner in which to approach such a subject; and it is this same careful spirit, coupled with an exceedingly clear and unbiased objective judgment, which strikes us so forcibly in all the writings of Kraepelin, and in the article before us not less than in his other works.

In a short introduction, Kraepelin, speaking of the rapid development of experimental psychology, expresses his surprise at the fact that, in spite of the importance which this branch certainly has for the psychiatrist, the latter paid comparatively little attention to it. He dwells upon the difficulty of the subject, on the care which has to be taken in experimenting, which not only consists in collect-

**Psychologische Arbeiten*. Edited by Emil Kraepelin, professor of psychiatry in Heidelberg. Leipzig, 1895, Engelmann.

ing a vast number of observations, but the most difficult part of which is to be found in the interpretation of the results.

A chapter of twenty-one pages on methods follows. Here the question is raised, where shall a study like this begin? The methods most thoroughly investigated in physiological psychology are difficult to apply to patients, and we must endeavor to obtain chiefly such as make less demand upon the person experimented upon, and are more like every-day occurrences; methods, furthermore, which do not require complicated apparatus, and not too long a time for experimentation.

In the field of reaction-time others have worked before Kraepelin, but inasmuch as these observers frequently failed to obviate the well-known faults of the chronoscope as an apparatus working by means of electro-magnets, their results are often doubtful. Nevertheless, studies in this field are by no means unfit for the purpose in view, *if the patients are carefully selected*. By interposing, moreover, between the elements of a simple reaction, other acts, as choice between different movements, associations, and the like, an insight can be obtained into these as well as, to a certain extent, into that particular element of a simple reaction which is altered, as the latter is in itself a complex act. Such studies of association times, together with other studies, have already led to some important results in the interpretation of a common symptom in mania and other affections. It had been thought that the incessant talking of such patients, the linking of superficial associations (or rhymes), which constitutes the "Ideenflucht" of the Germans, was due to a quickened association-time — that associations called up each other more rapidly than normally. The opposite has been shown to be true, and the whole symptom proves to be an outcome of the general motor excitement in which the motor processes of speech take their part.*

Among the methods originated by Kraepelin are the so-called continuous methods, in which in a given time as large a number of simple tasks must be solved as possible; thus, *e. g.*, the adding of units. (Appropriate books with figures have been printed for this purpose.) At a signal made by a clock striking every five minutes, a sign is made in the book. The amount of work done in such periods can be counted and compared. Other tasks can be

* Cf., also, Aschaffenburg: "Ueber Ideenflucht," paper read at the XIX. Wanderversammlung der südwestdeutschen Neurologen und Irrenärzte in Baden-Baden. Arch. f. Psychiatrie und Nervenkrankheit. Vol. XXVI, 1894, 597.

set—reading, memorizing senseless syllables (Ebbinghaus), or columns of figures, etc. In this manner we are able to study not only more or less simple psychical acts with particular reference to their duration, but also, which is of the greatest importance in this connection, the changes which occur during the work, and which are due to fatigue and practice and the like. Reading and writing can be investigated along lines already started. Moreover, studies have been made on the sense of touch by an appropriately arranged method, which allowed an insight into fatigue and centrally produced sensations in this domain. The sense of time, purely motor functions, and the depth of sleep, are other fields which have been looked into, and which promise much interest. All the methods which Kraepelin gives have not been mentioned here. Besides these, new ones can be devised, but yet all need first a thorough study with normal individuals, and a comparison by means of exact measurement in order to be certain of their applicability.*

An experiment in the best sense is one in which we can produce the particular condition which we wish to study, and in which we can not only alter it at will, but control some of the modifying conditions. Applied to the study of mental disease, this would mean the production artificially and intentionally of a mental disturbance. Although the application of this method must needs be very limited, it is nevertheless what the author attempts; indeed, he heads his second chapter: "Artificial Mental Disturbances."

To study the patients experimentally at the height of their disease is usually impossible; in the beginning of it they are, as a rule, not accessible to us, but during convalescence we may be able to obtain information through experimentation; nevertheless the former would be the most important, namely, the study of the first stages. And here it is possible, within certain limits, to produce the conditions under which deviations from the normal develop. In the first place the variations in our psychical state produced by the daily changes of external conditions must, in this connection, be considered and analyzed. They will be within normal limits, but we may fairly expect to be able to recognize by a study of them, the general lines along which pathological conditions become developed. Of these daily alterations there are two factors which first suggest themselves—fatigue and practice—but as soon as we go into the practical investigation of the question we find it

* Cf. former works: "Ueber die Beeinflussung einfacher psychischer Vorgänge durch einige Arzneimittel."—Jena, Fischer, 1892. Also "Geistige Arbeit."—Fischer, Jena, 1894.

complicated, resolving itself into many smaller ones. Thus, with reference to the former, the effects of fatigue should be studied when it is produced in a rested organ, on the one hand; on the other hand, when it is brought on in an already fatigued one. Bodily fatigue and mental fatigue should be investigated separately, and the influence of the one on the other be studied; moreover, the influence of external conditions, like nutrition, sleep, etc.

The rôle which over-exertion of any kind plays in the production of mental diseases is well known. Although we can not produce, experimentally, serious disturbances of this kind, nevertheless, here also, as was said, it may be hoped to get an insight into the direction along which these influences act; and a study of this kind may aid us to analyze, possibly, more complex mental disturbances, and we may be able to separate the essential from the non-essential.

Well aware of the impression which such statements will be apt to make on those who are not familiar with the subject, Kraepelin says that he is prepared to have this looked upon as "a castle in the air," "and certainly," he says, "we are very far from our goal;" but, on the other hand, there are also some results already obtained. Aschaffenburg made studies on the effect of exhaustion. He experimented for a whole night. We all know we feel different after a long night's work. But only by appropriate experiments was it possible to analyze this. There was chiefly a more difficult reception of external impulses. There were centrally produced sensations (hallucinations), a prolonged association-time. The associations were, moreover, more stereotyped, more superficial, as we find in the "Ideenflucht"; and, finally, the central motor excitability was greater.* Kraepelin notes in this the striking resemblance to an exhaustion psychosis, and draws attention to the fact that if we had to analyze a collapse-delirium we would come to the same conclusions. Since, in the latter condition, similar causes act and produce it, there is more than a merely superficial, outside similarity between the two conditions.

Another field for experimentally produced mental disturbances is to be found in some of the intoxications. Kraepelin's studies on the action of alcohol have led him to a better understanding of the mental disturbances ensuing from its use. The chronic intoxications can be better understood, and, moreover, it is just this study

* Cf., also, Aschaffenburg: "Die psychischen Erscheinungen der Erschöpfung," paper read at the Wanderversammlung in Baden-Baden. Arch. f. Psych. Bd. 25, 1893; 595.

which has led him to his present opinion on "Ideenflucht," and to the understanding of mania. The action of ether has been shown to be very similar to that of alcohol. Similarly of cocaine, and yet some differences have been observed, whereas morphine has been found to be quite different in its effects. Other drugs have also been examined. The study of all of them has not only a direct bearing upon our clinical experience with such intoxications, but also it gives us methods to study slight deviations from the normal mental conditions, and will aid in this way our understanding of other abnormal as well as normal conditions.

The drug effects, known up to the present time, as far as they have been measured, can be traced back to two fundamental activities of our psychical life, namely, to the reception and working out of impressions, and to the transmission of will-impulses; and the whole variety of action of the different drugs — alcohol, ether, chloroform, amylnitrite, chloralhydrate, paraldehyde, tea, and morphine — may be attributed to the varied combinations of acceleration or slowing of these two phenomena. Unquestionably the view obtained thus far is one-sided; and we must, by further inquiry, by formulating new questions and devising new methods, gain a more comprehensive view.

There is one consideration of which Kraepelin speaks in this connection which, problematical as it may yet seem, can not be passed over in this review. As we said above, the correlation of psychical alterations and physical ones has made very little progress. And how could it be otherwise? On the one hand there is no sharp observation of clinical facts; on the other no marked anatomical changes have been observed in the nervous tissue. In the latter an improvement is promised by Nissl's method; in the former, by accurate observation helped by experiment. Here the study of artificial abnormalities caused by chemical poisons, on the one hand, and, on the other, the lesions experimentally produced in animals, may lead later to a correlation of the two.

The third chapter is headed: "Personal Fundamental Peculiarities." Here Kraepelin comes to a very important part of his study, namely, the influence which the individuality of a person has upon the development of mental disease. This he estimates to be greater than has been supposed, external influence having a smaller share than was formerly thought. And although the extent of the influence exerted by a factor lately so much discussed, namely, auto-intoxication, can not as yet be estimated, there

unquestionably remain enough mental diseases in which there are no such circumscribed causes to be found at all, but in which the intrinsic peculiarities of the personality are to be made responsible for the pathological development. Degeneration, neuropathic taint, are terms which express these individual conditions. But such terms are vague, and sifting and grouping is necessary. This is the task of individual psychology. It is by no means an easy one, for we are dealing, not with tangible things, but with *processes*, which are changed and crossed by numerous and incalculable conditions in the most varied manner. Particularly interesting in this connection are the two properties of our psycho-physical organization, fatigue and practice. It was found that the latter was apparently different in different functions, while the former seemed to be a more fundamental property of the person. Of course in these studies many other points were found as these lines were followed out. The duration of the influence of practice in different individuals had to be looked into, and is unquestionably of importance. Another property was found which is different from practice itself. It is what we call "getting into the work;" it also increases the amount that can be done, but is of a different nature, in that it is lost very soon, whereas the effect of practice remains for a long time. That practice is nothing else than a special form of memory is further not to be doubted. Fatigue, on the other hand, lessens our faculty for work, and the amount which we can accomplish, but here Kraepelin says a distinction must at once be made between *fatigue* and *sense of fatigue*; they are two factors which need not by any means go hand in hand; on the contrary the two may be quite opposed to each other, a distinction which, in this country, has been insisted upon so strongly by Cowles.* Depressed conditions show frequently a sense of fatigue without fatigue. On the other hand, we find in anxious and maniacal patients an absence of the sense of fatigue; but fatigue itself may progress to profound exhaustion. Finally, Kraepelin thinks we may perhaps partly trace back the baneful influence of emotions to the fact that they rob us of the sense of fatigue, and hence disturb the necessary circle of work and rest. This is the more serious, since probably the sense of fatigue represents a necessary pre-condition for sleep. Both, therefore, should be compared particularly in our studies of psychopathical individuals. Just as in practice the duration of its effects must be studied, so here in fatigue the time for

* Shattuck Lecture, 1891, *Boston Medical and Surgical Journal*.

recovery, and with it possibly the depth of sleep, should be investigated.

Finally, a most important factor is the influence of distraction, or, rather, our power to resist it. This is our power of concentration. The importance of it need not be dwelt upon. To possess means for the measurement of this would be a valuable addition to psychopathological methods, but little has been done in this direction. We see from these points which have been selected, that here quite a number of personal fundamental properties have been found, which not only *may* be studied, but which, as experiments have shown, actually *can* be studied. The study consists in the finding of the rapidity with which different processes occur, be it in the domain of perception of external impression, in the association of ideas, or in the transmission of will impulses.

The *fourth* chapter is headed, "Psychical *Status Praesens*." In these psycho-physical properties, which, as has been seen, include neither feeling nor anything referring to the contents of our thinking, but are directed to the formal portion of our psychical life, to its dynamics, we have to deal with essentially psycho-physical factors. Although only a beginning of these studies has been made, a continuation may lead to a more accurate analysis of personalities and individual peculiarities than has been done before; above all, each step forward is made by experimentation, and reveals facts. In such studies methods will have to be devised, and tried thoroughly on one normal individual. The factors which appear to be the most important must be separated out, and must be studied by as short methods as possible on numbers of individuals. On the other hand, we must strive in the studies of individuals to get as many tests as possible to apply to them, *i. e.*, methods which give us an insight into as many parts of their psychical life as possible, for it is the whole individual which we are dealing with. In accordance with this plan Kraepelin has attempted, within the limits of the methods at his disposal, to establish in a number of persons some of their fundamental peculiarities, to obtain a *status praesens psychicus*, so to speak. This is, of course, as yet incomplete.

The study consisted of a careful arrangement, on five consecutive days—on each of which an hour's work was done—of the better developed methods above mentioned, so as to obtain an insight into as many psycho-physical properties as possible. But in addition to these methods he suggests, finally, others, which in part refer to the contents of our thoughts. He had a person write down

in five minutes as many nouns as possible, or sensory impressions which had a marked color, or things which produced noise, or things which were agreeable or disagreeable, or, finally, abstract ideas. He thinks that in this way we may get an insight (1) into the nature of association, how different associations are connected, what type of association is prevalent; (2) into the relative development of colored or of acoustic memory pictures; (3) into likes and dislikes; (4) into the production of concepts. These methods seem perhaps rudimentary as yet, and Kraepelin has done little with them, but they certainly are very suggestive.

In the last chapter Kraepelin speaks of the possible value which treatment and prophylaxis might draw from experiments as they have been indicated. An insight can be gotten, for example, into the question why maniacal patients are better treated by baths and rest than by leaving them to their constant desire to move about. We can get a knowledge of the psychical action of the drugs we use; and with regard to the prevention of insanity, we have now, through Kraepelin's studies, a better insight into the action of alcohol on mental processes, which it never stimulates, but always paralyzes. That steps can further be made toward a proper psychical hygiene is also evident from what has been said.

This review has taken much space, yet numerous important and interesting points could not be touched at all, from which the reader is recommended to make a careful study of the original. He will find a great number of facts which have been elucidated by the studies of Kraepelin and his pupils, and many valuable suggestions; and on every page he will gain the impression that these latter are not based upon vague speculations, but upon a long experience in practical, well-directed work in the laboratory. But as was said, the original is itself only an outline of the study which Kraepelin inaugurated—a study the details of which are partly published in former articles, and partly are to appear in the *Psychologische Arbeiten*, which, therefore, I also wish to recommend to the interest of the American psychiatrist.

CHRONIC DELUSIONAL INSANITY OF SYSTEMATIC EVOLUTION.

(LE DÉLIRE CHRONIQUE À ÉVOLUTION SYSTÉMATIQUE.)

CONTINUED FROM OCTOBER NUMBER.

LECTURE IX.

SUMMARY.—The insanities of the degenerate may manifest themselves at any of the periods of life, even in infancy; their mode of onset is sometimes abrupt and sometimes insidious—Symptoms of these insanities; frequent variation in their forms—The possible coincidence of some incompatible forms of delusion—Absence of systematic evolution—The hallucinatory forms of psychosis are not based on insane interpretations; they persist without transformation—The low mental level of the patient is disclosed by the weak form of the insanity.

In the preceding chapter we described as concisely as possible the insanity of the persecuted persecutors. Their special methods and tactics will serve to distinguish them from other forms of the degenerate psychoses as well as from chronic progressive insanity. If we examine the clinical basis of this distinction, which, although somewhat slender in some particulars, is well worthy of the attention of the physician, not only for prognostic but also diagnostic purposes, it will be necessary to review successively the various points of difference that separate these great groups. We have already seen that a knowledge of the history of the case furnishes us with useful indications, which not only throw light on the future of the patient, but also explain the existing phenomena. The history of a degenerate patient, as we know, differs from that of a person afflicted with chronic progressive insanity in this respect, that in the latter there is no history of hereditary predisposition, but instead, the development of a long-lying latent predisposition. We shall not here again refer to the existence in the degenerate of psychical and physical stigmata. The unstable and badly-balanced state of their moral nature renders them an easy prey to insanity and to a particular type of mental disease. If we compare chronic progressive insanity with the psychosis of the degenerate, we shall see that they differ as to the age at which the insanity appears, as to its mode of onset, its symptoms, its evolution, and its termination. Chronic progressive insanity commences in adult age; the psychosis of the degenerate is not limited to any age, and may even commence in infancy. We have seen that there is a long period of incubation in chronic progressive insanity, which forms a strong contrast with the previous life of the subject; the onset of the insanity in the degenerate may be either gradual or sudden.

When the insanity appears abruptly, it differs entirely from the mental manifestations during the incubation period in chronic progressive insanity. The subject of the former experiences none of the hesitancy, uncertainty, and timidity which characterizes the first stages of the latter disease. The inherited special aptitude of the degenerate enable them in a few days to systematize their insane ideas without the long probation period required by the patient laboring under chronic progressive insanity, and they quickly adapt themselves to the most intense hallucinatory disorders and essential changes in personality.

They may, moreover, express at the very beginning those ambitious ideas which only begin in the subject of progressive insanity after the cerebral resistance has been weakened by the course of a psychosis of long standing. In this way is partially explained the frequently fugitive and transitory character of the psychosis of the degenerate. They may be termed fleeting attacks of insanity, ephemeral and transitory, which leave very little trace behind, and do not depend upon a pathological basis slowly developed, year by year, as in progressive insanity. In other cases, on the other hand, the insanity is slowly developed in an insidious manner, it may be from infancy, whether an ambitious, mystic mania or a persecution mania. Besides the manner of its development there are other characteristics of the psychosis of the degenerate which, in this connection, demand our attention. There is, first, the frequently varying form of insanity, which may be described as proteiform; and, second, the possible coexistence in the same subject of many different kinds of delusion. It is very common, for instance, to find ideas of grandeur coexisting with ideas of persecution, and these again may be associated in the same individual with mystic, erotic, or hypochondriac delusions, and all these different delusions may exist associated with a mental condition, either of exaltation or depression. These aberrant mental manifestations follow each other, reappear and disappear without any determinable method of succession—the patient who was yesterday ambitious may be to-day persecuted, and to-morrow may be hypochondriac. The contrast between the irregularity and polymorphism of this psychosis and the orderly, methodical evolution of progressive insanity is sufficiently apparent. Finally the degenerate patient may manifest various impulses and obsessions, the episodic syndromata of his unstable moral nature.

We have seen how important a part hallucinations play in the

course and systematization of progressive insanity. In the degenerate manias of persecution and of grandeur may frequently be met with that require to be carefully distinguished from chronic progressive insanity. In the former the patients do not manifest any sensorial disorders, while in the latter, on account of the intensity and multiplicity of the hallucinatory phenomena, consciousness frequently becomes confused and obscured. In certain cases of progressive insanity intellectual disorder of a non-hallucinatory character ushers in the insanity, but sooner or later sensory disturbances manifest themselves, and hallucinations are always the most important agents in the genesis and systematization of the delusions. In a large proportion of degenerate cases, on the other hand, hallucinations are merely incidental, while in others the most careful observation fails to detect their presence. In these non-hallucinatory cases the insanity is purely intellectual, and in such cases the insanity may manifest itself in infancy, or at such an early age as eight or ten years (*originäre Verrücktheit* of the Germans), thus placing the hereditary nature of the disease beyond all doubt. The delusions are deeply rooted and firmly fixed; they prevail beyond all proportion in the patient's mind, and may persist without alteration during his whole life. Regarded relatively to their origin, such delusions may be considered as besetting ideas firmly established without the agency of antecedent hallucinations. In other patients of the same class the delusions may exclusively depend upon a multiplicity of illusions and false interpretations. Illusions of this kind are so vigorous that they can, without the intervention of sensory disorders, people the mind of the subject with insane conceptions. Again we may add that hallucinations may appear in some of these patients as secondary and unimportant incidents. The accessory action of such hallucinatory phenomena may, however, sometimes render diagnosis uncertain until examination reveals such a sufficient basis for the insanity as a dominant idea or an insane illusion. It is astonishing often to observe how insignificant events, such as a fortuitous coincidence or an ambiguous phrase or word, have, during the examination of such patients, been sufficient to make the insanity manifest itself. A little girl, whose father was in the habit of calling her a "little queen," based upon that phrase an ambitious insanity; and another child, whose mother, when punishing her, used the expression, "She is not my daughter; she was changed by her nurse," based upon these words a systematized insanity. To understand fully the great disproportion which

exists between cause and effect in such cases, we must recognize what is fully borne out by examination—the existence in these patients of a brain for a long time prepared for the inception of insanity from psychopathic inheritance, and which requires only a fitting stimulus to crystallize the most diverse delusions. The youthful susceptible brain is quickly and deeply impressed with the most erroneous conceptions; such conceptions are confirmed by the occurrence daily of insane illusions and by constantly recurring proofs. Moreover, a much exercised memory, together with weakened reasoning powers, is one of the best conditions for retaining and defending such insane convictions. Proofs upon proofs of his erroneous beliefs easily accumulate, and the subject is always prepared with a ready answer to defend his position by giving precise dates, propounding dilemmas and conundrums to his friends, and magnifying the most insignificant facts in order to use them as adjuncts and proofs of his accuracy. At other times, when it is attempted openly to convince the patient of his error, he either smiles superciliously and ironically, or sulks, as if his position were based on incontestible fact. Occasionally such degenerate persons, laboring under systematized manias of ambition or persecution, resemble the persecuted persecutors in their mode of behavior—those whom their insane delusions and illusions point to as enemies they pursue with characteristic tenacity and animosity. In St. Anne's Asylum we studied the case of a woman, thirty years of age, who has been affected from infancy with ambitious ideas and delusions of persecution. She was convinced that her father was a bishop, and that those whose name she had were not her relatives, but had murdered her true father. She is maintained in her beliefs by the constant occurrence of insane interpretations, and the strength of her convictions and the mode of her behavior correspond exactly to our description of the persecuted persecutors. Throughout her life she consistently hated her parents, and at last, exasperated by the inattention of justice to her demands, she shot her father with a revolver. A minute examination of the nature of her insanity revealed nothing more than the presence of an insane delusion controlling an ill-balanced brain, which, increasing in strength by the accumulation of erroneous proofs for years previously, had, without the intervention of any hallucination, originated a train of insane interpretations with the result we have stated. But the degenerate are also subject to the incidence of acute hallucinations with delusions of persecution transiently relieved by the presence

of ambitious ideas. There is no trace of systematization of the insanity in such cases, but, on the contrary, a secondary condition of extreme confusion of ideas, caused by the invasion of consciousness by innumerable hallucinations.

We shall record further on the case of an acute attack of this nature occurring in a degenerate patient during the progress of persecution mania, and which was rapidly cured. We shall also show that in many instances degenerate cases are apt to be confounded with chronic progressive insanity on account of a superficial resemblance, but in most cases such a mistake is impossible because of the intellectual defects, the childish, disordered nature of the insanity, the inferior mental condition and mental weakness which characterize the degenerate. Sometimes the patient may seem to be no longer convinced of the truth of his delusions. He may hesitate and doubt in a way that the subject of progressive insanity never does. The hereditary defects, the lowered mental level, the motor disorders, the physical stigmata, the general character of the insanity, all point to nervous degeneration. It is impossible to confound the coördinate, logically defined delusions of chronic progressive insanity with the absurd lucubrations of the mentally infirm.

Again, there exist other cases of degeneracy which, in the existing state of their insanity, may, without any reference to the beginning or evolution of the affection, assume a resemblance to the second or the third stage of progressive insanity. Indeed it is seldom that insanity in the degenerate makes its appearance with that complete systematization and deep conviction of the truth of its delusions that in progressive insanity is developed in the course of years. As M. Briand has observed, the manias of persecution and grandeur in the degenerate, compared with the same forms in chronic progressive insanity, may be regarded as analogous to the manner in which hysteria simulates completely the most typical characteristics of cerebral or spinal affections. We had recently under our care a young woman twenty-three years of age, who, for two days, had been affected with the sensation of whistling in the ears. She rapidly came under the influence of hallucinations. She declared that somebody reported aloud all her actions. When she undressed preparatory to going to bed she heard a voice saying, "Look, she is changing her chemise." Occasionally she heard three distinct voices, one of which defended her, another ordered her to do repugnant actions, such as eating pieces of coal or stealing. Sometimes a voice threatened to kill her. Without the per-

mission of "Madame la Somnambule," she is unable to talk or to do anything, and refers to this person any question that is put to her. She declares that she is able to "speak with her heart." The voice is an internal one (motor verbal hallucination). This young patient also had distinct hallucinations of sight (no alcoholism), painful hallucinations of smell, taste, and disorders of general sensibility. Very soon there appeared voices of a consolatory nature which praised her good heart and promised her rewards. In less than three months from the date of her admission this patient left the hospital completely cured, without any trace of hallucinatory phenomena remaining. This case had shown for some time a distinct resemblance to the second period of chronic progressive insanity, but the youth of the patient (twenty-three years), the abrupt commencement of the insanity, its rapid evolution, ending in complete cure, are so many distinct points of difference, which completely justify the classification of the case among the insanities of the degenerate with which it is associated by important clinical characters.

We have seen an example of this form of abrupt insanity with rapid evolution in a degenerate subject, in whom the mania of persecution disappeared after two months. He was a man of a badly balanced emotional turn of mind, but at the same time intelligent and well educated. One of his aunts had been insane. Succeeding a slight mental disturbance there occurred a transient insanity, with delusions of persecution and hallucinations of hearing. Everywhere he went he heard abusive voices. Through holes bored in the ceiling of his bedroom they insulted him at night. He imagined that there were people in the next room waiting to arrest him, that he was hypnotized, that his thoughts were being read, that he was followed by spies who believed him guilty of robbing a church-door collection box. He believed that chloroform was sprinkled over him, that magnetic influences were directed against him, through the influence of which he was made to perceive incredible monsters painted in red, white, and blue colors. From time to time he heard sympathetic voices which assured him that he was made to suffer too severely; that he was being defamed, and that he would probably receive as much as 2,000 or 3,000 francs as damages. After a short remission, extending over some days, the hallucinatory disorder increased and became general, and thus established that profound disorder of consciousness with a multiplicity of delusions which, according to Schüle, Krafft-Ebing, and Rosenbach,

always characterizes the acute hallucinatory forms of insanity. The patient gradually began to look pale and wearied, and to show a profoundly altered expression. He declared that he was constantly hypnotized during the night; that he feared his head would fall off, and incessantly cried, whilst staring at a corner of his cell, "Down with the hypnotizer and with the phantasmagoria!" He was alternately depressed with hypochondriacal ideas and excited, when he manifested twitching of the face and abrupt extension of the limbs. Sometimes he declared he was dying and at other times he would suddenly burst out laughing. He then became affected by hallucinations of sight of a pleasant nature. He would stare in rapture at the sun, and immediately afterward become melancholic. We observed in this patient systematized delusions of persecution, hallucinations, and some ambitious delusions corresponding to what is found in chronic progressive insanity. But in this case we have to do with a manifestly unstable individual, the beginning of whose affection was abrupt and in whom there was no period of incubation similar to that occurring in progressive insanity. In less than two months he was quite well and merely laughed when reminded of his insanity. Upon the whole, in this case, as in the preceding one, the hereditary and personal antecedents, the commencement and the termination of the insanity, all show, notwithstanding some superficially similar symptoms, that the form of mental affection is sharply distinguished from chronic progressive insanity. But in all these cases what chiefly distinguishes the insanity of the degenerate from other forms of insanity is its irregularity, which is in striking contrast to the regular progress and consistent evolution of the psychosis we are studying. Sometimes bursting out without any previous incubation, occasionally but rarely arising subsequent to some old-standing neurotic tendencies, the insanity of the degenerate may either end abruptly in dementia or it may rapidly disappear altogether, or, after a longer or shorter term of remission, it may reappear either in its original form or wearing an entirely different aspect. Chronic progressive insanity, on the other hand, progresses slowly but fatally, becomes transformed from day to day, is always getting more deeply rooted in the consciousness of the patient and is without any hope of cure, or even of a comparatively durable remission. The possible or probable curability of the psychosis of the degenerate is not by any means the least important feature of distinction between these two clinical varieties of mental affection. Sigowitz (quoted by Griesinger) recorded the

case of a patient thirty years of age, afflicted with a systematized megalomania, who imagined himself to be a colonel and general adjutant, a champion billiard player and a skilled horseman, who recovered from his affection within a period of a few months. We studied the case of a young man twenty-five years of age, with systematized delusions of grandeur and hallucinations, and who manifested all the symptoms of a patient in the third stage of progressive mania. From the very commencement of his insanity he was ambitious. He declared himself to be the son of a prince and of an emperor. He haughtily received his mother, of whom he spoke as his adopted mother. After two years his insanity suddenly ended, the patient recovered and was restored to his family. As was ascertained from his personal antecedents, which showed that he had a sullen temper, eccentricities of manner and mental instability, as well as from his hereditary antecedents, which revealed the existence of insanity both in the paternal and maternal line, this patient, from the very commencement, had ambitious delusions and never passed through the persecuted stage. Nothing in his case suggested a resemblance to the fatal evolution of progressive insanity. We can not better illustrate the distinction between progressive insanity and persecution mania in the degenerate than by the history of communicated insanity. (*Delire double.*)

The facts we mention prove that there are forms simulating progressive insanity with only a superficial resemblance to that disease. We have seen the slow incubation, the progressive course, the systematization of progressive insanity, as well as the lucid mental condition of the patient, and the probability of his infecting others, when it is explained that such an affection may, during the period of incubation or persecution, be communicated to those living intimately with the patient and sharing in his anxieties, who, by insensible gradation, assimilate his delusions of persecution, and finally end by helping to elaborate his insane conceptions. It is not necessary in such cases, where the symptoms of progressive insanity are communicated to a second person, when the one helps the other in slowly building up the edifice of the insanity, to suppose the existence of a double progressive insanity. In order to assimilate the insane conceptions of a second person one must be possessed of certain special attributes of mind which do not offer any strong resistance to such ideas. In such instances we generally find associated together an active intelligence which has created the insane scaffolding, and a passive, generally weak-minded

individual that has submitted to and repeated the ideas of the other like an echo.

There need be no collaboration between two such patients, but a servile copy by the second of the mental aberrations of the first. In our clinical lectures we have recorded the case where a mother, the subject of chronic progressive mania of three years' standing, communicated her insane conceptions to her daughter, a girl of comparatively feeble mental development. It should be added that while the psychosis of the mother was incurable, we found that the ideas of persecution imposed upon the daughter by the superior personality of the former rapidly vanished when the two patients were separated.

LECTURE X.

SUMMARY.—Some of the insanities of the degenerate may symptomatically simulate progressive insanity, but are distinguished from it by their beginning, evolution, and the different prognosis—The irregularity of the evolution of such psychoses, and the frequency with which recoveries take place, is in distinct contrast to the unvarying course of progressive insanity—*Delire double* an illustration of the difference referred to—Objections to the separate classification of chronic progressive insanity—The character of the cases justify their separation from other forms of insanity.

The fundamental distinctions we have endeavored to establish between the insanity of the degenerate and progressive insanity were eloquently defended in the discussions that followed the remarkable paper of M. P. Garnier in the Medico-Psychological Society. M. Camuset fully homologated our position and came to the conclusion "that there exists a nosological type of insanity composed of several analogous forms of psychosis having an invariable onset and evolution and confined to persons of normal development and free from mental affection up to the time of the commencement of their insanity." He proposed the term "regular chronic insanity" to distinguish this insanity from the distinct forms which occur in the degenerate. M. Marandon de Montiyel, while taking exception to certain points of secondary importance, fully agreed in believing that progressive insanity is not only in accordance with the facts of true clinical research, but that it also coincides with the known laws of normal and morbid psychology. M. Falret, in an interesting paper read at the Medico-Psychological Society, conceded the truth of the distinction drawn between progressive insanity and the insanities of the degenerate, and accepted on the whole the description given of this type of mental affection, but expressed his divergence on some points from our opinions. He divided the course of the disease into three periods: 1. A period of incubation. 2. A period characterized by auditory hallucinations and systematized delusions of persecution. 3. A period in which there occur multiple hallucinations, disorders of general sensibility, and stereotyped delusions of persecution. He considers that the metamorphosis of the character of the insanity from ideas of persecution to those of ambition is not constant, and that the latter ideas are merely a superadded form of insanity. Finally, he asserted that the period of dementia can not be properly regarded as forming a part of this insanity.

Those who deny the existence of this form of insanity point out that there are cases of persecutory mania which do not develop ambitious ideas, but a distinction has to be made between the subjects of progressive insanity and the hereditarily degenerate in whom delusions of persecution appear without any period of incubation. But if we admit the validity of this objection for the sake of argument it in no way affects our position. We have seen how slowly the disease progresses; that it commences in adult age; that it requires for its complete evolution a period of twenty or thirty years or more. It may often happen that the subject of insanity dies before the appearance of the ambitious period, or again the period of persecution may be a protracted one. There is no immutable pathological rule which absolutely limits the duration of the periods of any disease. It has not materially affected our conception of locomotor ataxia, although it has been shown that the disease is sometimes arrested in its fatal course, and that it may last for fifteen or twenty years without manifesting certain symptoms which were at one time regarded as essential to its correct diagnosis.

Intermittent intervals of sanity in the course of progressive insanity are less frequent than is supposed. The approach of the ambitious period may lead the patient to dissimulate and prevent us from observing the transformation of the disease. It is often by chance that we are enabled to perceive it. M. Doutrebent says we should always remember the observation of M. Falret, who acknowledged that he had lived for years beside patients laboring under chronic progressive insanity, who had passed into the ambitious stage without his being aware of it. This avowal on the part of such a careful and scientific observer ought to have weight with those who lightly use arguments against the existence of such a disease. At the same discussion many examples were brought forward which were intended to demonstrate the persistence of cases of persecution mania for many years without the development of any ambitious ideas, but unfortunately for some of these examples it happened that the transformation of the insanity really took place in them and had been accurately observed by other physicians. Further, it should be mentioned that M. Falret, who, in his first paper, fixed the proportion of cases of progressive mania passing through the ambitious period at about a third of the whole, declared in a later communication that such a proportion was merely approximate; that ambitious ideas, latent or concealed, frequently exist,

and that this fact may greatly modify the proportion formerly mentioned. This fact alone helps to establish the fact that progressive insanity may be more common than was formerly believed, and that it often passes unrecognized, even by the most careful observers. But it is urged again that there are cases in which ambitious mania has broken out suddenly, or has manifested itself from infancy, or has occurred periodically without a trace of pre-existing delusions of persecution. Those abrupt cases of megalomania are not included in progressive insanity, the chief purpose of the classification of which is to separate a disease characterized by a uniform evolution from affections without such a feature. The former cases belong to the class of the degenerate and in no way affect the validity of our thesis. It is further urged that persecution mania may be recovered from without showing any transient ambitious symptoms, which fact points to the relation such cases bear to the degenerate and to their separation from progressive mania. With regard to the final period of progressive insanity we need only refer the reader to the opinions expressed by Griesinger, Baillarger, Schüle, and our own previous statements, and finally to an examination of the patients themselves. M. Dagonet, who believes that megalomania is a special morbid entity, related cases in which the disease did not end in dementia. But a description of such cases enables us to perceive that they do not belong to the class of progressive insanity, but to that of the degenerate. One of his cases, a woman, for twenty years declared that she was an imperial princess, and another patient for twenty years had, every second or third year, an accession of ambitious mania. Such cases are, of course, degenerate. They show none of the periods of progressive insanity, and it is not wonderful that they did not become demented. Cases of this kind render it necessary to distinguish carefully in cases of mixed megalomania: 1st, cases of megalomania in progressive insanity which, after a period of persecution, become demented; and 2d, megalomania in the degenerate in whom the origin, march, and prognosis of the insanity are entirely different.

Many authors, including M. Falret, expressed grave doubts as to the utility of collecting various dissimilar clinical species of mental affection under the title of progressive insanity. The preceding description of this psychosis is, however, sufficiently exclusive, and incompatible forms of disease connected with persecution mania and megalomania have been eliminated. It was suggested that anxious melancholia and the pseudo-megalomania which sometimes

succeeds it were apt to be mistaken for progressive insanity. But it is sufficient to guard against any such error simply to bear in mind the four distinct periods of chronic progressive insanity.

In concluding this chapter it is desirable to briefly recapitulate the principal features that distinguish progressive insanity from other psychoses. For the sake of clearness we shall contrast the state of the patient in each period of the affection. In the stage of melancholia the patient might be mistaken for a case of hypochondria or melancholy. The latter, however, are not suspicious, nor do they falsely interpret the acts and gestures of those about them; they have a feeling of ill-being, for which they consider themselves responsible; the melancholic especially is self-accusative. The subject of progressive insanity, on the other hand, is particularly curious as to the origin of his new sensations, and attributes them to external intervention. The indications afforded by the age of the patient (adult age), the absence or very faint trace of hereditary taint in progressive insanity, the previously healthy mental condition, will be a sufficient guide in diagnosis. It must be borne in mind with reference to the period of persecution that any form of persecution mania in which there is hallucinations can not be looked upon as forming a stage of progressive insanity. Reasoning maniacs, persecuted persecutors, and persecution maniacs with systematized delusions must be excluded. There must also be eliminated the non-hallucinatory forms of persecution mania, clinical forms characterized by marked sensory disorders, which induce a more or less complete mental obfuscation of consciousness, and many other melancholic conditions. Acute, short, hallucinatory attacks and abrupt insanities appearing in predisposed patients manifest no systematization and are generally curable. The same may be said of the toxic insanities. It is only after a prolonged study of the disease that an accurate diagnostic facility is acquired for distinguishing accurately the persecution mania of the degenerate, which may, for a time, symptomatically simulate the second period of progressive insanity. The hereditary history of the degenerate, their psychical and physical stigmata, the comparatively early age at which the psychosis appears, the absence of an incubation period, the transient co-existence of other delusions, such as ambitious, hypochondriacal, mystic, and erotic ideas, are sufficient to distinguish it from progressive insanity. The two last periods of this disease present no difficulty in diagnosis. In the ambitious stage the knowledge of the existence of a preceding phase of per-

secution will throw light on the nature of the case and prevent its confusion on the one hand with megalomania, without hallucinations or evolution and of a fixed nature, and on the other hand with the generally polymorphous insanity of the degenerate.

LECTURE XI.

SUMMARY.—Medico-legal aspects—Criminal acts committed by patients—Concealment of delusions and perfect lucidity of mind exhibited by the subjects—The absolute irresponsibility of the cases—The duty of the physician toward cases of progressive insanity—Indications for treatment—Sequestration—Conclusion.

We have already seen, when examining the various modes of behavior of those afflicted with progressive insanity, how frequently such persons endeavor to end their torments by the commission of acts of violence. When sensory disorders, by their intensity and long continuance, rendered the existence of such cases intolerable to themselves, their aggressive actions were apt to be attended with fatal consequences. We have sketched the development that took place in the patients' behavior, at first manifested by attempts to elude their persecutors, acting only on the defensive and carrying their grievances to the notice of public authorities, but finally exhausted by useless endeavors, they seek to avert and frustrate their foes by taking the law into their own hands and committing some criminal offense. Such acts require to be carefully considered from a medico-legal point of view. The pathological impulses of the accused must be taken into consideration, and the relation of the act to the insanity and to the predominant sensory disorders must be carefully observed.

It is well-known that such patients can for a lengthy period retain the logical faculty. They can, with much apparent plausibility, explain their delusions, and, in spite of very prominent hallucinations, they present a mental condition of perfect lucidity. The care with which they often conceal delusions, even when these delusions have for a long time been systematized, and their reticence when they wish to hide their hallucinations, which they regard as symptoms of insanity, often cause the bystanders to look upon the patients as sane and responsible when he has committed some act of violence or attempted homicide.

Tardieu has remarked that it is extremely difficult for experts engaged in cases of insanity of this description to impress upon judicial authorities those elementary clinical facts which are of the greatest consequence in their bearing on responsibility. On this account some lamentable miscarriages of justice have occurred, and many persons whose patent insanity should have protected them were led to execution. Notwithstanding the dissimulation of the

patient it should always be possible for the physician to succeed in irrefutably demonstrating the morbid character of the actions of such patients. It may generally be proved that a person whose intelligence appears unimpaired, and who, up to the very last, performed his usual work, may be the subject of hallucinations and of systematized delusions of long standing. It may be possible to piece together the previous history of the insanity of the patient, the occurrence of the period of persecution after a preceding stage of incubation, and the slow and silent development of the affection. It is important to throw light upon the relation existing between the criminal act and the hallucinatory phenomena, from which ascertained data the nature of the affection may be diagnosed and the irresponsibility of the patient confirmed. Premeditation can not be disproved in such cases; for the most part it is undeniably apparent; nor does the patient attempt to palliate his crime, but, on the contrary, prefers to justify it logically. Yet, notwithstanding all this, irresponsibility must be urged. The mental individuality of the patient is completely altered in progressive insanity by the delusions of persecution and the painful character of the sensory disorders, and, in addition, the hallucinations themselves provoke and incite to active aggression. While the subject is predisposed by the nature of the mental affection, by his preoccupied thoughts, and by a continual state of mental and bodily fear, he is also directly stimulated to action by the character of the hallucinations. Legrand du Saulle's view was that in slight offenses the patient need not be considered as having acted altogether under the influence of his insanity, but that certain of his actions might be regarded as voluntary, and that consequently he might, with certain reservations, be held responsible for these actions, even though they were based upon his ordinary delusions. Such a view is inapplicable to progressive insanity, but it may be mentioned that Legrand du Saulle included in his mania of persecution many different forms of mental affection. We can not do better than recapitulate one or two of Tardieu's very apropos remarks on this question: "Above all, the expert must endeavor to ascertain the predominant delusions which govern the patient and offer an explanation of their bearing on the acts. A very little observation will enable him to perceive that in no sense of the term are there present in those patients either affections of the will power or homicidal impulsions. On the contrary, it will be found that the reasoning powers are endowed with persistent and singular strength, and although the

reasoning faculties are led by the influence of illusions of the senses into trains of thought, intermingled with the most absurd delusions, yet that there are produced side by side sensible and improbable deductions, which may end in violent and regrettable actions. Each case of this insanity shows irresponsibility in different degrees, and it is the duty of the physician, acting with the certain approbation of his own conscience, to do all in his power to shield them from sentences directed, not at criminals, but at pitiable sufferers."

In the preceding chapters we insisted on the inexorable, hopeless, and fatal development of progressive insanity. The treatment of such a disease is purely symptomatic, and there is, of course, no special form of medication. First of all, nothing must be done which can injuriously affect the patient's physical health; such therapeutic remedies as depletion, purgatives, emetics, and the systematic use of shower-baths tend to debilitate the patient and feed his diseased fancies, and should be avoided. Trephining has been boldly employed by a foreign physician, who has also recommended the excision of the cortical auditory centers.

The method of intimidation energetically advocated and practiced by Leuret has been totally abandoned. The patient was placed in a shower-bath and detained there until he retracted a belief in his delusions, which retraction, it may be safely inferred, though drawn from the lips, was insincere. Hifflesheim's method was at one time used in the Salpêtrière for the treatment of hallucinations. It consisted in the application to the head of a series of small galvanic piles formed into the shape of a crown, the poles of which were applied to the ears, and in this way a weak galvanic current passed through the brain. The system was attended with no satisfactory results. Moreau de Tours proposed datura stramonium or cannabis indica for the treatment of sensory disorders. As both these drugs are themselves capable of producing hallucinations this may be looked upon as an application of the *similia similibus curantur* method, but their administration was equally unsuccessful, and when we remember that alcohol has the power of producing many hallucinations, and that it aggravates those of progressive insanity, we need not wonder at the result. Arsenic was used by Lisle, but also without success.

Although there is no treatment which can possibly relieve such a deep-rooted psychosis as progressive insanity, there are various indications for the treatment of symptoms in individual cases in the

different periods of the affection. Tonics, iron, and hydro-therapeutic applications may be advantageously employed whenever the patient requires them. It is essential to prescribe a dietetic regimen. Such patients, especially when in the stage of persecution, with delusions of poisoning, are often badly and irregularly fed, and frequently eat indigestible kinds of food, from which arise digestive disorders and exacerbations of their insane conceptions. The meals must be carefully regulated, the state of the bowels attended to; indigestible dishes, spiced sauces, alcohol, and coffee must be forbidden, and exercise should be ordered to be taken after each meal. If the patient takes insufficient food, or refuses it altogether, the œsophageal tube should be used without hesitation. Occasionally during the course of the disease a condition of mental excitement, with increase in the activity of the sensory disorders and of the insanity, manifests itself. For the treatment of this excitement the bromides and simple or alkaline tepid baths may be advantageously employed. Sleeplessness should be treated with chloral. Remissions in the sensory disorders and in the insanity are frequently brought about by change of life, and by the moving about of the patient from place to place. It is of primary importance that the physician, when consulted regarding a patient who has become violent in his behavior, and has threatened the imaginary authors of his persecution, recommend immediate seclusion, for there is generally but one short step between the utterance of the threat and the action that follows. Not only is sequestration followed by a transient improvement in the patient's condition, but it is also advantageous in sheltering the patient from external causes of irritation, in checking his aggressive actions, and in insuring the public safety.

Before concluding this monograph we shall briefly recapitulate the principal points of interest in the study of the disease. The fact that there are patients who slowly pass through the four successive periods of anxiety, persecution, grandeur, and dementia is beyond refutation. In order to diagnose correctly such a constantly progressing form of mental disease the physician must observe carefully, not only the various symptoms presented by the patient, but also and specially the evolution of the disease. Many so-called varieties of mental disease, such as demonopathy, mystical mania, megalomania, persecution mania, theomania, are only so many symptomatic stages or successive steps of one affection, which ought not to be confounded with other psychoses. It is of little

real benefit to recognize clinically that a patient is a theomaniac or a megalomaniac, or to know that he calls himself a God or a king, or the president of a republic. The essential thing is to ascertain the history of the disease and to discover whether the existing ideas of grandeur were or were not preceded by a period of persecution. When a patient with delusions of grandeur is diagnosed by the physician to be laboring under progressive insanity his ultimate fate is certain. But if, on the contrary, his delusions of ambition have not been preceded by a period of depression and persecution, and if he belongs to the class of the degenerate, the prognosis is much less grave. We may, therefore, safely conclude from our collected and published cases that there do not exist such isolated pathological affections of the mind as megalomania, religious mania, or persecution mania, but one definite psychosis characterized by four successive stages, viz., chronic progressive insanity with systematic evolution.

LECTURE XII—APPENDIX.

We have thought it might be interesting to add short notes of six out of the thirty-two cases presented by Dr. Magnan in his clinical lectures, to illustrate the subject of progressive insanity.

Case I, first and second periods; incubation and confirmed persecution; age sixty-four years; duration of disease thirty-four years. No hereditary antecedents. His numerous family relations were all healthy. Personal antecedents are as follows: He lived a regular life in his youth and was an apt pupil. At the age of sixteen he became clerk to a bailiff in Paris, but on account of the riots in 1848 he was thrown out of work and went back to the country. In 1854 he came back to Paris and got married. At first his wife noticed nothing unusual about him, but in 1857 she observed that he became suspicious in his manner towards his friends and neighbors. He became jealous of his wife, accused her of being faithless, and created scenes in his own house. In 1860 he took notions about magnetism and complained of being acted on by electricity. He said that they used foul language by means of a magnetic machine, but he did not know who "they" were. In 1870 the events of the war and of the commune spurred on his insanity. He would not sleep in the same bed with his wife, whom he declared to be a petroleuse. He avoided contact with her, and to protect himself from electricity he wore magnetic stays, a Pulvermacher belt, and placed insulating plates of glass under the legs of his bed. In 1871 he complained to the police and was placed in confinement. His sequestration improved his condition and he was released, but immediately afterward imagined that he was being poisoned, as a proof of which he carried his excrement in paper to the police office. He stated that his enemies were the communards; that they had killed his father and plotted against the republic, but on account of the manner in which they have tortured him, some "International people" have tried to remedy the evil and to protect him. They proposed to allow him £3,000. There are millions hidden at Geneva and London, and he is sure to be paid (this is the beginning of the ambitious period). He is still very reticent, but when pressed he admits his condition.

Case II, auditory and genital hallucinations; vigorous actions; vague accusations, becoming gradually more precise until the name of the persecutor is mentioned. Madame I., thirty years of age; her

father was paralyzed at the age of fifty-five; a sister is melancholic. She says that for three and a half years people have been playing tricks upon her. Her food has been spoiled and people have come into her room to publish false marriage banns. Gradually hallucinations and disorders of sensibility in the genital regions were added. Her neighbors and the concierge gave her a powder which threw her into a state of lethargy, and during her sleep they abuse her in the most shameless manner. They introduce spoons, knives, and forks into her vagina. They administer poisoned clysters, sew up her anus and then tear it open again and introduce sticks into her rectum. While she is out, they go into her room and perform lewd gestures and actions in front of her photograph. She is constantly watched and spied upon and made a fool of. During the night they enter her room and cut her lips. Finally, exasperated by these persecutions, she fell to abusing the people in the house, and ran after one of her neighbors with a knife. This patient is a virgin.

Case III, of twenty years' duration. After passing through the period of incubation, she has been ten years in the third stage. She accounts for the persecutions she has undergone by the fact that she is heiress to an inheritance of thirty million francs. This patient is sixty-two years of age. Her mother died of paralysis. Twenty years ago she observed that she was the victim of jealousy and gossiping. Since her arrival in Paris twelve years ago, a vicar, M. C., with Jesuits, women and children, insults her everywhere she goes. This vicar when preaching made allusions to her and incited her to give herself up to him. He stated that he would dispossess her of her inheritance and of her palace on the banks of the canal in Venice if she refused to yield to him, but if she permitted him to avail himself of her, he would make her a great personage. He began to poison her mother, her male and female cousins, and at last, not having succeeded in mastering her, he had her confined in an asylum. He enjoys an income from the thirty millions, and not content with despoiling her, he watches over her and spares her no humiliation. Occasionally he comes to see her and to insult her. The conduct of this vicar with the nuns of St. Vincent de Paul is scandalous. As for her, she will not yield; she sticks to her rights. This is manifest by the public declarations the vicar makes in his sermons.

Case IV.—Val. L., forty-six years of age. Shortly after her husband's death, in 1872, the patient became gloomy, depressed, and anxious. She lives alone. She thinks that people mean to do her

injury; that they abuse her. She refuses to work, because people who bear her ill-will insult her in the streets. She hears people say about her, "There is Mr. A.'s sweetheart; there is the doll of the big Auvergnat." Freemasons, witches, and inquisitions are busily at work upon her. A fellow, called B., attracted her and played tricks upon her. As her insanity became systematized the patient began to use a special vocabulary. She says that she is seized by witchcraft; that she undergoes the war of the invisible; that they have struck her thoughts and made her speak. Disorders of sensibility are also present. She declares that her heart is in their keeping, and that they work inside of her to destroy her; that vampires gnaw and devour her inside and suck her blood. The approach of the ambitious period was heralded by voices which shouted to her for the last three and a half years that she was the granddaughter of Louis Philippe; that she is to marry Sigismund d' Apremins. She also has developed a double personality. The empress Eugenie has entered her body, lives as she does, which prevents her marriage with Sigismund. The empress is at the head of the invisible army. The patient maintains a haughty attitude, and refuses to shake hands. When at home she kept her door locked and never went out.

Case V.—Madame V. C., forty-three years old, a lacemaker, was of illegitimate birth, with no ascertained hereditary history. For six years she had been depressed and preoccupied. She would not go outside, because she thought people on the street would injure her. She heard them use obscene language to her. Later on, disorders of general sensibility appeared. Her delusions became more systematized. She declared that tools as long as bowels were introduced into her body; that poisoned iron wires had got into her head, and that the body of another woman was inside her own body. She gets swollen and hard, and on one occasion struck her belly with a hammer in order to break the unfortunate visitor's head. She affirmed that sometimes the woman inside her body enjoyed sexual relations with her husband, while she herself was usually inert and indifferent at these times. When her conjugal relations were normal she knew that the other woman was not in her body. Occasionally she had sexual relations with a man she felt but did not see. Even when she remained sitting in her chair she felt the same sensations. She feels insects creeping under her skin and sucking her juices. Occasionally she had disagreeable hallucinations of smell. Later, she said she belonged to a great family,

and did not want to work. She heard voices telling her that she had won the capital prize.

Case VI.—Female, seventy-one years old; little is known of her history. Her mother was married twice, and separated from both her husbands. The patient was fifteen times in the Salpêtrière. Her disease extends back to the year 1840, when she was twenty-seven years old. She seems to have had, toward the end of the reign of Charles X, relations with some great personage of the court. Then she happened to be mixed up with the events of 1870, which had the effect of impressing themselves upon her delusions. Toward the end of Louis Philippe's reign she began to perceive that she was shadowed by the police. Ugly stories were told of her, and false reports of her conduct were given in. About this time she went to the Louvre to copy pictures. There she was very much annoyed and discredited. Her pictures were destroyed, her colors were stolen, and she was prevented from working. The government wished to seize important papers in her possession. She went there because she knew that people repeated all that she said or thought, and they might easily find out her places of concealment. The governmental police employed stock-brokers to make her lose her money; they deceived her and made her sign her name unduly often. Voices that used to insult her told her that she was the granddaughter of Vidal, the governor of Martinique, and that she belonged to the family of Champigny. In 1856 she became aggressive. She took steps to regain the fortune out of which she had been cheated. She thought that spies came to her house to watch over and to insult her, and she threatened to set the place on fire. In 1870 she became a revolutionary propagandist, teaching, working, and advising action when the time had come. She went to manufactories to waylay the workmen and to spread her ideas. On one occasion she was taken into custody when on such a mission. For some years past her mental faculties have been declining, and she has abandoned many of her grandiose delusions. She has become emotional, and is easily moved, either to tears or to laughter. Her memory is failing, and her ideas are becoming confused. In her case there is a double cause for the intellectual decay; first, the natural progress of the insanity, tending toward dementia, and, secondly, the influence of the increasing atheroma of the cerebral blood vessels.

ABSTRACTS AND EXTRACTS.

THE PHYSIOLOGICAL PATHOLOGY OF EPILEPSY.—Marinesco and Serieux, in a memoir crowned by the Belgian Royal Academy, a portion of which is published in the *Gaz. Hebdomadaire*, November 23d, in discussing the pathology of epilepsy, first take up the physiology of the cortex, holding with Munk and his followers that the cortical convolutions contain the elements necessary for the perception of impressions, and that their excitation causes, according to the degree of the excitation and the region, hallucinations or convulsions. The neurons of the cortex are of three kinds—the perceptive, or the centripetal axis-cylinder neurons, the associative, and the centrifugal or discharging neurons. There is not, they hold, any direct route between the cortex and the muscles; every so-called voluntary, but really reflex, movement is made through the intermediation of the lower or spinal centers.

The aura is simply a hallucination of cortical or reflex origin, according as the epilepsy is central or reflex in its nature. In the former the cortex plays the same part as does the epileptogenic zone in peripheral or reflex epilepsy. The loss of consciousness, which is an essential symptom of epilepsy, but which need not necessarily be complete, is explained variously by different authors, some attributing it to cerebral anæmia, some to congestion, and others still to functional interruption of the psychic elements (Herzen and Buccola), or to disturbance of special centers (Bianchi). The authors consider it due to a phenomenon of arrest, bearing especially on the neurons of association. The stimulation of the perceptive elements produces the aura; that of both the perceptive and association elements produces automatism, pre- and post-epileptic delirium, etc.; that of the discharging neurons gives rise to the convulsions.

The cry that has been attributed by Axenfeld to fear, by Billod to spasm of the glottis and thorax, Marinesco and Serieux attribute to excitation of the cortical laryngeal center of Krause and Horsley. The fall is also one of the motor phenomena, and is not due to the loss of consciousness.

The pupillary immobility and dilatation is also a central phenomenon, as is proven by the fact that if the sympathetic of one side is divided it fails on that side, while very marked on the other. It is, according to Fr. Franck, one of the most significant organic symptoms. The involuntary discharges of urine or fæces are due to the contraction of the abdominal walls and of the musculature of the bladder and rectum. The intense cerebral congestion is considered as a vaso-motor reflex from the sensory cortex. The biting of the tongue is simply due to the spasmodic contraction of the muscles of the jaws, and those pushing out the tongue. The salivation is a secretory phenomenon, and not merely the emptying of the gland; the influence of the chorda tympani is exerted by the cortex.

The later symptoms, exhaustion, transitory paralysis, aphasia, etc., are due to the modifications of the cellular elements; they are simply phenomena of

nervous exhaustion. The protoplasm of the cells is incapable of its natural reaction in the centers for the paralyzed functions.

CEREBRAL HEMORRHAGE.—L. Stein, *Deutsche Zeitschr. f. Nervenhe.*, VII, p. 313, in studying the etiology of cerebral hemorrhage, concludes that miliary aneurisms have much less to do with its causation than has previously been held, and apart from mechanical causes, such as trauma, etc., hemorrhage of the brain is most frequently due to disease of the vessels that causes a loss of elasticity in their walls. Typical miliary aneurisms are rare, but atheromatous and luetic changes of the vascular walls play a very extensive rôle. Mechanical causes are more common than is commonly held to be the case in producing hemorrhage, without any real arterial disease sufficient of itself to produce it.

GLIOSIS IN EPILEPSY.—Bleuler (*Muenchener med. Wchn.*, August 13, 1895—*Gaz. Hebd.*, October 12th) examined twenty-six brains of epileptics with the view of testing the findings of Chaslin. He studied only the sub-pial proliferation of the neuroglia, which he found over the whole cortex, but the olivary region was not involved, as claimed by Chaslin. All the patients were more or less demented, and the changes corresponded more to the degree of dementia than to the epilepsy, and he could not determine the influence of the attacks in producing the lesion. Similar lesions, more or less marked, were met with in five cases of idiocy, three of paresis, three of paranoia, and three of senile dementia, but they did not present the same regularity in the gliosis as did the epileptics. The neuroglia cells of the cortex were not increased in number, but were often pigmented. Lesions of the nerve cells were also found, but their connection with the epilepsy was not certain. In some cases vascular lesions were present. The relation of the gliosis to the epilepsy is hard to state; it may have been a consequence instead of a cause. As all of the cases were of long duration and demented, it could not be said that the anatomic changes occurred parallel to the attacks, but the author thinks it is possible.

On the whole, the investigation does not clear up the pathology of the symptom or support especially, the assumption of Chaslin—that the original lesion is apparently to be found in the neuroglia.

PUERPERAL INSANITY.—Dr. J. E. McCuaig, *Medical News*, November 16, 1895, claims that in no class of cases of insanity is the prognosis so favorable as in those of puerperal origin. In his statistics of those of under a year's duration only 3.3 per cent of the maniacal cases became chronic and 12.4 per cent of the melancholic cases. The recovery percentages of cases of less than three months' duration were respectively 89.3 and 75.

The number of previous pregnancies seems to have little influence, but the age seems of more importance; the younger the patient the better, apparently, is the prognosis.

SYPHILIS OF THE BRAIN.—In concluding a clinical lecture on cerebral syphilis, Dr. C. K. Mills (*Medical News*, December 7th) makes some general remarks, of which the following are the principal points: Direct true inflam-

mation of the cerebral substance from syphilis is rare, and occurs especially in the vicinity of gummata and in connection with meningitis. Neurotic softening, due to obliterative muscular inflammation, is sometimes mistaken for an inflammatory product. Charcot and others have described a localized disseminated cerebral inflammation. The symptoms of this and other forms are multiform and are largely masked by those of the tumors, meningitis, or other associated lesions.

Some forms of focal sclerosis of the nerve centers are due to syphilis. According to Lancereaux, these can be distinguished from other forms of sclerosis by the greater tendency of the neuroglia to fatty degenerations, and by the occurrence of foci of softening in their neighborhood. The occurrence of true insular sclerosis of the brain is dubious, but its possibility is favored by analogy. Cases of miliary and lobular sclerosis have been recorded with clear specific histories.

If recognized early, and promptly treated, some of these conditions may improve or approximately recover, but absolute cure is questionable. The great remedies are iodides and mercury, and the weight of authority is in favor of the former over the latter. If the iodides fail, mercury may be tried.

The iodides should be used in efficient doses if at all. Dr. Mills usually begins with fifteen or twenty grains three times a day, gradually increasing till several drachms are taken daily. If iodism is produced, it may be necessary to discontinue treatment, but occasionally, when due to small doses, larger ones cause it to disappear.

If it can be systematically and thoroughly carried out, mercury, by inunction, is one of the best methods of mercurial treatment—from one-half to one drachm can be used daily. By the mouth, calomel and the biniodide are to be preferred, the former in small doses frequently repeated, with opium, if necessary, to control the bowels, and the latter in doses of one-twelfth to one-sixth grain, with the same precautions. In Germany the hypodermic administration of mercury has been used with success; also to some extent in this country.

Dr. Mills indorses Gower's suggestion, that every syphilitic subject should, for five years after his last symptoms, undergo a three weeks' course, twice or three times yearly, of the iodide in daily dose of twenty or thirty grains.

HEREDITY AS A CAUSE OF IDIOCY.—M. W. Barr, *Times and Register*, September 7th, discusses the effects of heredity in the production of idiocy. He reviews a number of authorities, showing up to 70 or 80 per cent with hereditary antecedents of mental or nervous weakness, reports several cases of hereditary families of imbeciles or idiots, and finds from his study of 1,044 idiots, 38 per cent with heredity of insanity or imbecility, and 21½ per cent with that of various neuroses. Consanguinity of parents he found in only 3½ per cent. Intemperance in parents was found in 18.38 per cent of his cases; the Connecticut statistics showed 32.34 per cent. He agrees with Langdon Down as to the importance of intoxication of the father at the time of begetting the child, as shown in one case in his own practice. Phthisis, which Shuttleworth credits with 28.31 per cent, he does not specially discuss.

In conclusion, he refers to the "Tribe of Ishmael" as the most appalling example of heredity on record, where the history traced through forty years "shows descendants of one unclean, neurotic man, multiplying by consanguineous marriages into 250 families, numbering some 5,000 individuals, whose continuous criminal record has passed over the Northwest a flood of imbecility and crime."

THE SUPREME COURT OF THE UNITED STATES has just put itself on record by a decision in regard to the plea of insanity, that will, as coming from the highest court in the land, have great authority as a precedent. On December 16th Justice Harlan handed down the opinion of the Supreme Court in the case of Dennis Davis, charged with murder and tried and sentenced in the United States Court for the Western District of Arkansas, in which the defense had been insanity. The court below had instructed the jury that it was incumbent upon the defense to establish the fact of insanity to secure acquittal on this charge, but this ruling was reversed, the court laying down the principle that the burden of proof of guilt rests in all criminal cases upon the prosecution. In delivering this opinion Justice Harlan cautioned the courts against giving too much heed to popular clamor against pleas of insanity. The opinion in this only states what is the natural corollary of the principle—that every man is presumed innocent till proved guilty.

JUVENILE PARESIS.—Alzheimer, *Allg. Ztschr. f. Psych.*, LII, No. 3, discusses the subject of early paretic dementia—the developmental general paralysis of Clouston and others. He analyzes thirty-eight cases found in the literature, and adds fully detailed accounts of three personal observations of his own. He finds that, as regards its etiology, syphilis plays a predominant, if not, indeed, an exclusive, rôle; that hereditary predisposition seems to favor it, and traumatism may be the immediate cause of the outbreak of the symptoms. Clinically, the tendency is toward a form of chronic dementia without delusions, though other psychic symptoms may occur, but generally as transient phenomena. The course and prodromal stage are rather longer than in the adult type. The paralytic symptoms generally appear early, and are prominent throughout. Hemiplegias, paralytic strokes, tabetic symptoms, optic atrophy, etc., are relatively rather frequent.

The macroscopic post mortem findings are similar to those in other forms, and the same is true of the finer lesions. In two of his own cases he found pronounced degenerative changes in the basal ganglia.

While the cases reported show many peculiar features these are not, in his opinion, such as would authorize us to erect them into a special clinical type. Aside from the youth of the subjects, all the peculiar features are met with in different cases of paresis of older persons.

This form, however, he holds, throws a certain important light on the pathology. The usual causes other than syphilis to which paresis is attributed—grief, care, overstrain, the struggle for existence—fail here; the paresis occurs at an epoch when physical and psychic stress are at a minimum, and the influence of syphilis is all the more marked. The develop-

mental changes credited by Clouston and others can hardly play a part as early as the ninth year (at which age some of the cases began), and therefore Alzheimer rejects these as an especially important factor.

THE TREATMENT OF MORPHINISM.—Gilles de la Tourette, *Bull. Gen. de Therap.*, September 15, 1895, (abst. in *Rev. Internat. de Méd.*): Two chief methods of treatment are practiced—the total removal of the drug at once, and its gradual discontinuance, each of which has its special indications. In general, when the daily quantity taken exceeds fifty or sixty centigrams, the total suppression of the drug is advisable, as the gradual method takes too much time to demorphinize the patient. It should be done in a special establishment, away from home associations, and by a competent specialist physician. The patient's physical condition should be examined to see whether he has any cardiac disorder or attacks of angina pectoris, as in such case the brusque suppression of the drug may give rise to syncope. The condition of the digestive organs should be attended to, as alimentation is an important part of the cure. The administration of the drug should be regulated before the suppression, and for this, isolation in a special establishment is essential. It is easier to break off a regular habit than an irregular one. M. Gilles de la Tourette's rapid cure does not consist in a complete stoppage of the drug at once, but in a rapid suppression in the course of four or five days. It is of importance, therefore, that the habit be controlled before it is begun, so that the rate of decrease of the dose can be accordingly regulated.

If the patient's daily quantity is one gram of the alkaloid, he reduces it at once one-half. If two grams, he reduces it to seventy-five centigrams. As a rule about two-thirds of the dose is taken off the first day, and ten centigrams each following day, so that by the fifth day the suppression is complete. The first eleven hours the patient feels relatively well, there are no disturbing phenomena, but after twenty-four hours there are liable to be symptoms which, if they occurred when the patient was surrounded by his family, would, perhaps, necessitate the interruption of the treatment, hence the advantage of isolation. The most serious of these is syncope, that has amounted sometimes, in extreme or ill-judged cases, to fatal heart-failure. If there is no cardiac disorder, however, it is of slight importance, and can be relieved by a hypodermic injection of eight or ten centigrams of morphine. Vomiting, when it occurs, can be relieved by iced grog, champagne, etc. Diarrhœa may be salutary, as, according to some authorities (Sollier), the system relieves itself of the poison by the intestines. If, however, it becomes so severe as to be, as in some cases, a veritable morphinic cholera, it must be met by appropriate treatment. Maniacal excitement, vociferations, deliriums, etc., can be treated by sedatives, lotions, and baths, and, as it is usually during the eight or ten hours preceding the last hypodermic dose that syncope occurs, this should be given the last night. During convalescence the diarrhœa should be watched; it may last several weeks or a month. The same is true of the insomnia, and a sojourn of six weeks to two months in the special hospital is a very valuable adjunct to the treatment. Baths, douches, tonics, well-ordered and generous diet are needed

to restore the patient and to ward off the accidents of convalescence. The patient's weight should be recorded, as its increase will indicate the result of a good condition of his digestive tract. Travel, residence in the country, may be of value as removing the causes of and preventing a return to the old vice.

The gradual progressive method gives less good results; the reason of this is the length of the treatment, which is continued over two or three months instead of four or five days. It fails at least eight times out of ten. Accidents are rare, and it is employed only with the timorous patients. The following is Professor Charcot's method: (1) To insure, as a *sine qua non*, that the patient gives up one-third of his usual daily dose at once. (2) To substitute for the morphine the extract of opium; thus, for two and a half centigrams of morphine, he would give one and a half to two centigrams of opium, taking care not to exceed ten centigrams of opium; bromide of potassium may be also added against the excitement, the pains in the limbs, etc., up to the amount of three, four, or five grams. At the end of the treatment there will be in use about five or six centigrams of opium and four or five grams of bromide. At the same time douches and hydrotherapy are to be employed. Whenever it is possible we should try to have the last four or five centigrams of morphine shut off at once. When this is done the bromide and opium dose is unimportant, as after the hypodermics are discontinued the patient does not care to take them. Then it is only a small matter of ten or twelve days to the final end of the treatment.

THE MENTAL STATE IN VERTIGO.—Dr. J. Leonard Corning, *N. Y. Med. Journal*, September 7th, concludes a paper giving an account of some experimental researches on vertigo, with the following conclusions:

Summary.—1. In vertigo, however slight, consciousness is always impaired.

2. This impairment increases in the direct ratio of the intensity of the vertigo.

3. Though the clinical causes of vertigo are manifold, they have at least this in common—that they, one and all, are capable of interfering, either directly or indirectly (reflexly), with cortical function, with consequent impairment of consciousness. To regard vertigo as essentially a cortical derangement, of either direct or indirect origin, accords with the experimental data, and is clinically explanatory.

4. The condition of psychical instability and sluggishness engendered by vertigo favors the occurrence of hypnosis.

5. A person in a state of vertigo is thereby rendered unusually susceptible to the influence of nitrous oxide, ether, and other agents of light character; but, if the anæsthetics are first inhaled in moderate quantity (without inducing unconsciousness), it will be found that when an attempt is made to induce vertigo the latter is diminished or entirely prevented. The significance of this last fact, from a neuro-physiological standpoint, is apparent.

THE ETIOLOGY OF PARESIS.—Hirschl (Wien), *Verein f. Psych. u. Neurol.*, in Wien, October 4, 1895, rep. in *Neurologische Centralbl.*, November Vol. LII—No. III—I

1st, attempted to prove that paresis is a tertiary syphilitic condition, utilizing for the purpose the statistics of 200 male paretics in Krafft-Ebing's clinic. All other causes than lues are trivial. In 175 cases, with a sufficient history, 56 per cent were certainly syphilitic, 25 per cent probably so, and in the remaining 19 per cent the data were insufficient to pronounce syphilis probable. But in sixty-three cases of late syphilitic symptoms only 54 per cent gave a certain, and 9.5 per cent a probable, history of syphilis, while 36.5 per cent furnished no history of specific disease. The unity of the clinical and the pathologico-anatomical findings sufficed to show also a single etiological moment—syphilis—and that a combination of causes is not essential. The following facts are to be borne in mind: (1) The anatomical process is a diffuse interstitial cortical encephalitis, analogous to interstitial hepatitis; only that in the encephalitis the process sets in with the involvement of the organ cells, while in hepatitis this has not yet been demonstrated (non-specific interstitial hepatitis, for example, after phosphorus poisoning, begins with degeneration of the parenchymous cells). There is no other interstitial encephalitis than paresis. (2) Reflex pupillary rigidity occurs almost exclusively in paresis, tabes, and syphilis. It is one of the symptoms associating paresis with lues. (3) Various observers have seen remissions produced by specific treatment (two cases in Vienna). The iodides generally are preferable to mercurials.

In the discussion following, Wernicke (Breslau) claimed that the peculiar lesion in paresis was that of the nervous elements (Tuczek and Lissauer), and that interstitial lesions were secondary and unimportant. Lissauer has shown (1) that the focal symptoms of paresis depend upon focal, laminated destruction of the ganglion cells at the points which are the starting points of the local symptoms; (2) that the granular cell degenerations in brain are secondary, and behave like other secondary degenerations. Tabes and paresis are after-disorders, but not modes of manifestation of syphilis; the latter only furnishes the soil. Nothing can be said for the specific treatment of paresis. W. had never seen any effects from it, especially the mercurial treatment. Improvement may follow the iodides, when there is a simultaneous increase of body weight, but this is true also for the acute psychoses.

Putzar (Schönbrunn) said that according to Flechsig sulphide of carbon intoxication might give rise to paresis, especially in the young.

C. S. Freund (Breslau) remarked that two series of cases of paresis after trauma must be distinguished; in one there was antecedent syphilis, in the other not. The last has a very slow course (ten to twelve years), great retardation of thought, monotony of ideas, frequently combination with hysterical stigmata. To this class belong also the so-called campaign paralysees. The final picture is that of the usual paresis.

Anton (Graz.): Thousands of syphilitics are not paretics, and this is to be considered. Bodily and mental overstrain is an important factor. In the lower classes of the large cities there are many more paretics than in the country asylums. A comparison can be made also with lyssa. He had seen in the incubation stage in four cases of lyssa, a sudden outbreak of the symptoms from emotional disturbance, shock, fall under the wheels, etc.

Chiari (Prag.) had observed two pathologico-anatomically different types,

those apparently without meningitic processes, and those in which marked adhesions occurred, so that the pia could not be removed without taking the cortex with it. He also considered the disappearance of the nerve elements probable.

Pick (Prag.) was personally of the opinion that in paresis we had to do with a parenchymatous process, but there were two facts to be considered: (1) Paresis is not a clinical unity; (2) our methods hitherto have been insufficient for the proof of interstitial alterations. We must hope for some help in obtaining this in the Weigert glia stain. He had observed in one case with existing luetic lesions, the latter to give way to specific treatment, but there was no remission of the paresis.

Wernicke (Breslau) was already informed as to the results of Weigert's glia stain. The alterations of the glia, according to Weigert, are nothing else than the secondary expression of a preceding parenchymatous process. * * * The adherence of the pia to the cortex is generally a post-mortem lesion; in autopsies directly after death there is no decortication. Only very rarely are actual microscopically determinable growths between the pia and cortex.

Hirschl (Wien): Syphilographers to-day count gumma also as non-syphilitic (Finger). There was no case of intoxication paresis among his 200 cases. Traumatic cases give the appearance of paresis, but the symptoms of pupillary rigidity and disorder of speech are often wanting; while there are many syphilitics and few paretics, there are also few gummatous cases.

Winternitz (Wien): Finger's views as to tertiary syphilis are very questionable; it is doubtful also whether tertiary syphilis is not hereditary; also whether it is not infectious, as is also dubious the difference of the influence of the iodides on secondary, and of mercury on the tertiary manifestations. Both phenomena may occur in the same person.

THE RELATIVE PROPORTIONS OF THE CRANIUM AND MANDIBLE ACCORDING TO SEX AND AGE.—The following are the conclusions of a paper by Gurrieri and Masetti, *Rivista Sperimentale*, XXI, pp. 297-318, on the above, deduced from the study of 200 crania:

1. The male cranium weighs more than that of the female, with or without the lower jaw.
2. The difference between the weight of the cranium and the jaw is greater in the male than in the female.
3. The individual variations of the weight of the cranium are greater in the female than in the male.
4. According to age we find the above the more marked, and we further find:
 - (a) That the male cranium between the ages of twenty and forty-five is heavier than between forty-six and seventy.
 - (b) That the same is true of the cranium in the female.
 - (c) That the male cranium is heavier than that of the female in both periods of life, viz., between twenty and forty-five, and forty-six and seventy.
5. The lower jaw is heavier in the male than in the female

6. According to the age, we find still more prominently accented in the lower jaw the relations we find in the cranium, thus:

(a) The mandible in the male between twenty and forty-five is heavier than that of the male between forty-six and seventy.

(b) The same holds good in the female sex; and—

(c) In the male, both young and old, it is always heavier than that of the female.

From these conclusions it is shown that the difference in weight between the cranium and mandible is a good index for distinguishing the sexes; and, further, that it gains in importance when we take into account the influence of age on the weight of both.

THE ELIMINATION OF PHOSPHORIC ACID IN THE URINE IN THE DEPRESSIVE STAGE OF CYCLICAL INSANITY.—U. Stefani, *Rivista Sperimentale*, XXI, p. 319, reports the result of an investigation as to the excretion of phosphoric acid in the urine. He first reviews the available literature of the subject and shows the uncertainty and divergence of opinions. As regards mental disorders, the opinion seems to be that it is increased in the excited stages and forms, but nothing very definite has been shown as regard the elimination in depressive conditions.

Stefani reports a carefully observed case in which daily examinations of the urine were made in the post maniacal interval, the initial stage and acme of depression and the remission, which clearly shows a decrease of the elimination of both urea and phosphoric acid during the depressive stage, the decrease of the latter, which is much the more marked, beginning at the first onset and gradually decreasing till the acme is reached, then the quantity gradually augmented till the remission, during which it early reached its maximum. The decrease in the excretion of urea was much less marked and regular, but the regular lessening of percentage proportion of phosphoric acid to urea was very noticeable. The quantity of the urine notably decreased in the acme of the attack, while its density was greatly augmented.

Not believing it possible to maintain constant the diet, an examination of the faeces from the beginning was not attempted, and lacking this, Stefani does not attempt to say whether the diminished elimination of phosphoric acid is due to reduced absorption or to retention. Ordinarily, judging from the known facts, he would refer the decreased elimination, in great part at least, to a modification of the intimate metabolism of the cerebral tissues, which does not appear to follow a decrease of mental activity, but, on the contrary, to precede it, and one might almost say to prepare the way for it.

NEW REMEDIES IN EPILEPSY.—Lui, *Rivista Sperimentale*, XXI, 1-2, 1895, has experimented with the Flechsig opium treatment of epilepsy, and with the Bechterew method of combining with the bromides an infusion of *adonis vernalis*. During the use of the first-named method he observed a mitigation of the disease in two cases, but an intolerance to the treatment in the third. In ten epileptics, treated by the Bechterew prescription, he found generally a marked improvement, and observed no unfavorable modifications

of the patient's condition, while under the Flechsig treatment some of the symptoms of disordered digestion and mental torpor were frequently observed.

The Bechterew method was tried also in a rather unusual case of vagus neurosis, characterized by violent stenocardiac attacks, with laryngeal spasm and bronchial asthma, etc., with marked beneficial results during the methodical use of the method.

Experiments with the borate of soda treatment were not so successful, and he does not indorse it.

Following Lui's communication is one by Guicciardi on the Bechterew method, of which the following are the conclusions:

1. Bechterew's solution is not curative of epilepsy in itself, but does cut off, or rather much diminish, the attacks.
2. It acts on these, apparently, mainly through the bromide it contains.
3. It is usually well borne by the patients, while it permits an easy tolerance within the limits of its proper dose (80 to 120 grains), and, as it appears, does not carry with it any of the common but disagreeable effects of the bromides (possibly because with this method the latter are given in a notably attenuated solution).
4. It is in every way more effective than borate of soda, and has none of its injurious effects on the general health and the digestive apparatus.
5. It can be employed also for a long time without injury or cumulative effects, or any marked diminution of therapeutic effect, the dose remaining the same.
6. It possesses, therefore, the indications of simple bromides for reducing the violence and frequency of the convulsive attacks, but can be used in preference to it when a revival of the cardiac force is required, and in cases with general debility, and by its mode of administration, it may be especially useful in private practice.

THE FORENSIC VALUE OF INVESTIGATION OF THE VISUAL FIELD.—Ottolenghi, *Rivista Sperimentale*, XXI, Fasc. 2-3, thus sums up his conclusions from a study as to the value of the visual field, in a medico-legal point of view, in continuation of the line of research already carried on by him and published in the *Gazetta Ospedali and Archi. Psich. Sc. pen. e. Antrop. Crim.*, in 1892 and 1893. He gives diagrams of the visual field in delinquents and epileptics, and reports in detail three cases in which its examination was utilized in the testing for simulation of insanity. His conclusions are as follows:

"Coming to the conclusion of this study, I believe myself authorized to infer that the measurement of the visual field may be of great value under many circumstances in legal medicine —

"1. By the study of the sensibility in general and the psychic examination of the degenerates, as is shown by the investigations made of cretins and deaf mutes.

"2. By bringing out features that may be diagnostic of epilepsy and congenital criminality.

"3. By furnishing symptomatic data, not pathognomonic, but frequent, in neuroses and traumatic epilepsy.

"4. In determining the action of certain excitants — magnets, amyl nitrite, emotions, hypnosis, etc.

"5. For testing the sincerity in certain mental states, unmasking skilled simulation, examination of the visual field simply for testing the phenomena of fatigue, also in many ways gives occasion to determine the sincerity of the subject."

THE CIGARETTE HABIT.—J. C. Mulhall, *Quarterly Journal of Inebriety*, October, 1895, says that cigarette smokers may be divided into two great classes — those that inhale the smoke and those that do not. The latter class is a very small one, and they are comparable as a *habitus* of tobacco to the users of the pipe or cigar, but to a less degree. All real devotees of the cigarette inhale, and the pleasure of cigarette smoking, as compared with other tobacco habits, consists in the pleasurable irritation of the laryngeal and tracheal branches of the pneumogastric nerve.

The absorption of nicotine is in proportion to the absorbing surface, hence a great part of the danger of cigarette smoking. When the smoke only enters the mouth three-fourths of the nicotine is wasted, as regards intoxicating power, as compared with the cigarette; and while the cigarette is weak as compared with the cigar or pipe, this practice and the continuous repeated dose indulged in by most of its *habitués*, make it far the most injurious.

The evil effects of cigarette smoking are both local and constitutional. Symptoms other than those of nicotine poisoning need not be expected and are not found. There is no reason to believe that other drugs are often, if ever, made up in the cigarettes than tobacco. The local effects are those on the upper respiratory passages, and these simply consist in hyperæmia and mild irritation. The great evil is the constitutional effect, especially in the young, who are the more readily led into the habit by the mildness of the dose and ease with which it is begun. The smoker soon learns to inhale, and the result is a more rapid and complete poisoning of the system by this habit than by the use of strong cigars or pipes, and the effects of the nicotine on the nervous system is the sooner produced.

After puberty the evil is not so great, but is still serious; the greatest danger is in the young, who are becoming more and more addicted to the habit. It is at once the most dangerous introduction to the use of tobacco, and later becomes one of the most potent methods of saturating the system and insuring its evil effects. The part it plays in increasing nervousness and mental troubles is serious enough to make every effort at reform of what is becoming a national vice advisable.

INSANITY IN CHILDREN.—Conrads, *Archiv. f. Kinderheilk*, XIX, 175–216, gives a lengthy review of the subject of infantile mental derangement. First, he notices the varieties of insanity in children and gives an extended notice of the literature. As regards the question of the relative frequency of insanity of the two sexes in children it can not be definitely stated with our present statistics.

Among the causes heredity is first; next comes the condition of the child's bringing up, his education and training, the management by nurses by frightening their charges, the discipline and methods at school, etc. Psychic causes, fear, shame, and especially mental shock, are not to be underestimated. Emminghaus found 23 per cent of the cases he collected in the literature to be due to these causes; homesickness is not common, but cases have been known. Conrads lays some stress on the evil effects of religious excitement in predisposed older children.

Contagious (mental) and epidemic influence need mention, as they have been repeatedly observed. Onanism has been undoubtedly overestimated as a cause, but in predisposed persons it may have its effects.

Among the somatic causes, acute infectious fevers are first in frequency. Emminghaus found these as a cause in 25 per cent of his cases. Trauma, especially of the head, insolation, exposure, etc., have all had their victims. Ear disease and dentition may affect the mental condition, and the effects of nasal disease, adenoid vegetations, and tonsillar enlargements are suggestive. Middle-ear disease has been demonstrated by Bouchut and Emminghaus as causes of infantile derangement; intestinal parasites, tuberculosis, and cardiac weakness are also factors. Hereditary syphilis is the cause of juvenile paresis; whether it acts in producing other forms of insanity is uncertain. Long continued suppuration has been the cause of melancholia, as in one case of Conrads' own observation. Reflex psychoses, aside from those from ear and intestinal disorders, have been observed to follow wounds, extraction of teeth, etc. Various poisons—lead, mercury, cocaine, tobacco, etc.—have caused mental disease in children as well as in adults, and alcoholic insanity has been often reported. Conrads gives briefly a case of acute hallucinatory delirium observed by him in a child of 2½ years, from this cause.

The permanent psychoses of children occur usually in degenerate individuals, who sooner or later reveal their stigmata. The first symptoms of insanity can naturally only be looked for after the conscious perceptions have become manifest in the child and must consist in aberrations of these. The earliest age at which hallucinations have been observed is 14½ months (Marce). Visual hallucinations are far the most frequent. Delusions can only show themselves after a certain stage of mental development.

The types of mental disease in children fall under two heads—the pure psychoses and the forms connected with the neuroses. Of the former it is difficult to say whether mania or melancholia is most frequent in the earlier years, and both are most frequent toward puberty. Mania generally begins without the prodromal, depressed phases, runs a subacute course, and generally ends in recovery. Melancholia may assume any of its types, is commonly gradual in its onset, and is subject to remissions. Its course and prognosis are the same as mania.

Suicide in children should be mentioned in this connection, and from the statistics of France and Prussia seems to be steadily on the increase. It is, however, still infrequent. Conrads, taking the proportions of adults and children in Prussia in connection with the statistics of suicide, finds that it is forty-six times less common in the latter than in the former.

Periodic insanity in children is usually of the maniacal type, and, with

circular insanity, has an absolutely unfavorable prognosis. But few cases of either are found in the literature.

Under hallucinatory insanity, Conrads includes two types—acute hallucinatory paranoia and transitory insanity—both characterized by hallucinations, the former the more chronic and the latter the acute type. In the former occur the stuporous cases that are often confounded with melancholia. The prognosis of both, except when they succumb to exhaustion or suicide, is favorable.

Paranoia of the pure type is rare in childhood, but the degenerative prodromal stage of the original paranoia of Sander is very common. These candidates for paranoia are usually of the male sex; in all there is a hereditary taint. They are generally quiet, sentimental, and hypochondriacal children, who are liable to feel themselves slighted by their parents, and often conceive notions of self-importance, which are the incipency of their delusions. Hypochondria is closely allied to paranoia, and while its occurrence is rather rare, and has been denied in children, it is sometimes met with and is usually a degenerative sign. Its prognosis is only favorable in the milder cases. Imperative conceptions and acts are also met with, and frequently indicate a degenerative taint, and are often connected with masturbation as an exciting cause, but they are not so serious in their prognosis. The so-called "impulsive insanity" is diagnostically indistinguishable from these impulsive acts, though it has been accepted as a special type. It is always degenerative and of unfavorable significance.

Passing by what is said of idiocy, a word can be given to moral insanity. This, Conrads claims, rarely exists without some mental impairment, and sexual perversion is often present. Recovery is as improbable as in idiocy; the apparent recoveries are, perhaps, only remissions of long duration.

Paresis in children has been lately reported by various authors. Its connection with hereditary syphilis has been already noted.

Among the neurotic insanities, that connected with epilepsy takes the first rank. Hysteria is commoner in children than it is generally supposed, especially in girls. Heredity is its most important etiological factor. The mental disorders of chorea consist mostly in capriciousness, irritability, and a great tendency to sudden emotional disturbances. Hallucinations, illusions, and maniacal delirium may also occur, and Leidesdorf has observed hallucinatory paranoia. Very recently Moebius has directed attention to the resemblance of choreic to toxic insanity as supporting the view that chorea may be of infectious origin.

As regards the therapy, it would be best if all cases, except the milder forms of mania and melancholia, hypochondria, and the cases of imperative conceptions, and the stuporous cases, were treated early in a special asylum, very few, if any, of which, unfortunately, exist for children. Prophylaxis is still more important, and should properly begin literally *ab ovo*. The marriage of degenerates, insane, drunkards, etc., is a most prolific cause of infantile insanity and idiocy. Where the tendency exists in the child, its bringing up and education must be the subject of the greatest care. Ignorant and reckless nurses, especially if given to drink, may do the greatest injury, and in no case should alcohol in any form be allowed to a child under

ten years, excepting, of course, as medicine in acute infectious diseases. Special care should be given to the points of masturbation and the general habits of the child; to the possibility of nurses or others working injuriously upon its fears and imagination; to the educational methods and discipline. It would be well were teachers obliged to study mental pathology in their professional preparation.

As a summary of the points in regard to which it is desirable to direct attention in relation to the psychoses of children, Conrads concluded his paper with the following as desiderata:

1. Statistics of infantile insanity, by means of circulars of inquiry to the medical profession, as to the actual number of insane children in their knowledge.
2. Information as to relapses, by communication from medical men as to the mental disorder of persons who had been insane in childhood. These could best be obtained from family physicians, who are usually able to follow the family history back for a lengthy period.
3. Special asylums for insane children.
4. Sufficient knowledge of teachers of the psychopathic states in childhood, and greater care in schools to mentally-defective children.

BOOK REVIEWS.

State of New York. State Commission in Lunacy. Sixth Annual Report, October 1, 1893, to September 30, 1894. Transmitted to the Legislature May 24, 1895. Albany: James B. Lyon, State Printer, 1895.

This bulky volume of nearly seven hundred pages includes a large and varied amount of information, much of which has in it more or less of interest to the alienist physician. Some of the matter of the report, as in every publication of its kind, is purely perfunctory and official, and need not engage our attention. Such are, for example, many pages of the statistics and some portions of the special reports. The greater part of the book will, however, be found to contain something worth reading by the physician who has to do with the insane, especially in asylum practice, and it contains some important information. Among the subjects of general interest discussed is the dietary of the insane, which has been the theme of several papers recently published in this journal. What is said here hardly adds much to what has been published elsewhere, excepting as giving the individual views, in certain respects, of the New York superintendents on the dietetic list proposed by Dr. Flint.

The chapter on the "Provision for Insane Convicts" brings out the fact of experience that the plan of the Matteawan Asylum is not the best for such patients, and the recommendation is made by the commission that they be relegated back to a special department in one of the State prisons. This experience might have been anticipated by one practically acquainted with this class of the insane, but the classification might better be made, it would seem, on other grounds than the mere fact of conviction of crime.

This idea is also embodied in the message of Governor Morton to the Legislature, in the recommendation that a "plain and substantial asylum" be built for this purpose on land adjoining the Clinton prison at Dannemora. He approves the recommendation of the erection of hospital annexes at the several institutions. There is always danger in vast congregations of the insane that the interests of the acute and curable cases may suffer. Nothing would tend more to the improvement of the scientific work of the State hospital service than the realization of this suggestion. Science must always be encouraged to the utmost to hold its own against mere ways and means.

The answers from the different hospitals to the series of questions proposed by the commission give interesting data and indicate a very advanced and humane system prevailing in New York State hospitals. The slightly variant but generally judiciously conservative views of the superintendents on the questions of restraint, open doors, female attendants in male wards, etc., are especially noteworthy.

The report of the investigation of the New York City asylums by the commission, on account of charges by the New York *Herald*, amounts practically to a condemnation of the political system of control of these institutions. One rather striking finding is that in regard to the charge of overdosing. The physician admitted freely that single doses of as much as

120 grains of morphine, 14 grains of hyoscyamine, and 90 grains of chloral had been given to one patient, who, it was claimed, was, by idiosyncrasy, resistant to lesser doses of these agents. The natural impulse of most therapeutists would have been to have stopped short of these quantities, and the commission's censure of the experiments seems, on the whole, rather mild.

A matter of some interest is that of the decisions of the Post Office Department as to the correspondence of the insane. The question as to the definition of the "comparatively few" of the patients' letters that ought to be suppressed is, of course, subject to the decision of those who have the matter directly in charge.

Aside from these special features of the report, something may be said in regard to the defense of the general policy of the commission as stated at the beginning of the volume. It seems to be exercising the functions of a board of control, together with those of advisory medical and medico-legal supervision, and the tendency would seem to be to ultimately supplant and abolish the local boards of management. The combination, in a close board of only three members, of the business control with the other and higher functions of a lunacy commission, is an experiment that has not heretofore been a brilliant success, and there is a danger, in our opinion, of an undue predominance of a "business" spirit over the higher professional and scientific one. The ideals of the two are not in the same line, and while the former is perhaps the one most readily appreciated by the mass of the public, the latter is that which should be the aim of a body that is to have their fullest confidence. The tithing of mint, anise, and cummin tends sometimes to a neglect of the weightier matters of the law.

Of course everything will depend upon those who are to carry out the objects of the lunacy commission. Upon their scientific spirit and judicial fairness, their correct judgment and strict sense of propriety and honor, as well as upon their absolute integrity, everything really depends. It is to be hoped that these points are duly appreciated by the New York Lunacy Commission in the difficult and complicated task they have assumed.

Des Impulsions Irrésistibles des Epileptiques, par le Dr. Victor Parant, Directeur Médecin de la Maison de Santé Privée de Toulouse. (Irresistible Impulses of Epileptics, by Dr. Victor Parant.)

The title of this paper, read at the Congress of Alienists and Neurologists at Bordeaux, does not seem to us to be well chosen. It treats of the coördinated acts of epileptics in the states of more or less imperfect consciousness characteristic of the disease. The amnesia, which usually follows such conditions, renders their psychology somewhat obscure, but there seems no reason to suppose that the subjects of such attacks make any effort to resist their impulses, or are conscious of any reason for doing so. To apply the term "irresistible," under the circumstances, seems to us like calling the thoughts that pass through our minds in dreaming, "imperative conceptions." We should prefer to confine the term to the "obsessions," which give their victim no rest until he yields to them, although all the time painfully aware of their absurdity.

Leaving the title out of the question, the paper is an excellent resumé of

the present state of knowledge on the subject, without any marked originality either in theory or clinical facts. It brings together a multitude of observations, hitherto scattered through the medical journals, and the author's conclusions, both theoretical and practical, seem to us, almost without exception, thoroughly sound.

He holds that it is proved, by clinical and experimental evidence, that the epileptic attack results from irritation of the cerebral cortex. Usually the motor centers are principally involved, resulting in convulsions, but, although they are the most common and conspicuous phenomena, they are not the only ones. Disturbances of sensibility and of the intellectual functions are also observed.

It seems to us that this view, correct as far as it goes, could be much more strongly stated. The intellectual functions and, as far as can be determined, the sensibility are as profoundly affected as they can possibly be in the coma, which forms part of an ordinary epileptic attack. When, in connection with an attack of *petit mal*, the patient performs coördinated and, apparently, purposive acts, of which he afterwards retains no recollection, these differ from the complete loss of consciousness of the fully developed attack in degree — not in kind — just as the slight muscular spasm of such an attack differs from the violent convulsions of *haut mal*.

After considering the mental disturbances occurring in connection with convulsions, which may either precede, accompany, or follow the convulsive movements, he takes up the question of larvated epilepsy, or epileptic equivalents. He holds it to be established that undoubted cases of epilepsy, mental disturbances, in all respects identical with those connected with convulsions, may occur without any convulsive movements, and when precisely similar attacks occur in cases in which no convulsions have ever been observed, he sees no reason to question their epileptic character. He believes, therefore, that in such cases a positive diagnosis of epilepsy can be made in the absence of any history of convulsions.

The author agrees with Magnan in holding that other forms of insanity may coexist with the mental disturbances due to epilepsy. Epileptics, in very large proportion, present the stigmata of degeneration, and are liable to the same mental disturbances as other degenerates. Thus they may suffer from mania, melancholia, or paranoia in addition to epilepsy, and, in Magnan's experience, it has not been rare to find an alcoholic insanity superadded to such a combination, so that the phenomena of the three forms of mental derangement could be traced, coexisting in the same patient.

After discussing at considerable length the various disorderly and criminal acts which may result from the epileptic condition, he takes up the semeiology of the irresistible impulses of epileptics. One of the most characteristic features of the condition is suddenness of commencement. There is usually no warning; the subject, in the midst of his ordinary occupation, without any previous evidence of mental disturbance, suddenly performs some absurd or criminal act.

It is customary to say that the patients are unconscious during such attacks, but, as the author very properly points out, persons who show that they see what is about them, answer what is said to them more or less relevantly,

adapt means to ends, even take long journeys without acting so as to attract special attention, can not be said to be entirely unconscious.

Amnesia, on the other hand, is one of the most uniform and characteristic symptoms of the condition. As a rule, the patients have no recollection of what has happened. This, however, is not invariable, and the fact of a more or less distinct memory of the attack does not exclude epilepsy.

Another frequent characteristic is the identity of the symptoms of different attacks in the same person. The same words will often be spoken, the same acts performed, time after time.

Frequently the acts done during the attack are inconsistent with the patient's habitual conduct.

In the maniacal form, in addition to the foregoing, hallucinations, usually of a terrifying nature, are very generally present.

The patients show a ferocity of disposition entirely different from the elation of an ordinary maniacal attack, and often develop a degree of strength far in excess of their ordinary power.

The diagnosis follows from the foregoing points. Although all of these symptoms may be found in other conditions, the combination of all or several of them will ordinarily be sufficient to establish a diagnosis.

In regard to the medico-legal bearings of the subject, the author holds that, although the fact that a criminal act was performed under the influence of an epileptic impulse absolves the doer from responsibility, the mere fact that it was done by an epileptic does not prove that it was so performed. Many epileptics, even those subject to such mental disturbances, are, most of the time, entirely sane, and they should be held responsible for their acts, unless it appears that they were done during a condition of temporary or permanent mental derangement.

He considers that great caution should be exercised in the discharge of those epileptics who have been confined in institutions for the insane, on account of dangerous and criminal cases, and recommends that superintendents should not take such responsibility upon themselves without a consultation of experts.

NOTES AND COMMENT.

THE SUMMARY.—The editor feels like an unprofitable servant in his efforts on the "Half-Yearly Summary" of the present issue of the JOURNAL. (The former Summary editor, Dr. J. M. Mosher of New York, is abroad.) But however unprofitable "we" are, our readers must share the censure with us. Taking the forty-five States of the Union and the British Possessions, not one-third of them have come forward, after due request being made, with the needed items. Taking the whole number of institutions, the proportions of those offering anything is even smaller.

It is a cause for regret that the institutions and the men engaged in the profession of psychiatry are so little given to voicing themselves. This is doubtless a part of the unhappy isolation to which the institutions have been doomed, but which we believe is now becoming more and more a thing of the past. Many of us, it is true, are afflicted with "groanings that can not be uttered," but there is not one who might not with advantage become articulate in the columns of the Summary each time that it appears. There is not one among our hundred and a half or more of institutions that does not have really interesting material for an item of news. On the other hand, much of what is given is often too little condensed and possesses only a small amount of *general* interest.

Real *advancements*, real *news*, and a proper mixture of the personal element, which is so attractive when judiciously commingled, would greatly improve the Summary!

THE SUGGESTIVE PATHOLOGICAL RESEARCHES of the past few years in regard to the finer anatomy of the nervous centers bid fair to elucidate many obscure questions. Thus, the conception of the neuron, and the discovery that nerve connections are by contiguity rather than by continuity, suggest numerous possible physiological and pathological processes, which suggestions have been very extensively followed out by Andriezen and others. Taking with this the discoveries of Hodge as to the effects of fatigue upon the nerve-cell, confirmed later by Russian and English observers, we have a basis for at least extensive enough hypotheses for the exercise of the scientific imagination, to say the least. Some of the conclusions of Andriezen as to the pathological condition of different

cortical elements in insanity, seem as yet unsupported by actual facts of research, and are therefore still mere assumptions, but they are interesting and suggestive and they are along the line in which it is probable that we are to gain positive results in the future.

In this country the field has been ably occupied by Berkley, who, in his studies of the changes of the cortical cells and their processes from alcoholic intoxication and in dementia, has apparently, without going beyond the legitimate limits of deduction, given us a rational theory of the cortical pathology of general mental impairment in the atrophy and disappearance of the lateral gemmules of the cell processes, which seem to be the first, as the axis cylinders are the last, to suffer under toxic or morbid influences. His work has the merit of going no farther than the ascertained facts reasonably allow, and is therefore a valuable scientific acquisition.

The field is, so far, only opened for investigation, but the prospect given for the future, of gaining greater knowledge of what has been a *terra incognita*, the histological pathology of mental disease, is most promising.

THE PROSECUTION, before the County Civil Service Board, of the chief medical officer of the Cook County Asylum for the Insane, for insubordination to the lay head of the institution, is a humiliating instance of the estimate placed by politicians upon professional and "business" men respectively. The doctor could not give a death certificate in a case of sudden death without an autopsy, for which he made preparations and obtained the consent of friends without first asking permission of the political "business" man who was the legal head of the establishment. For this he has been tried for insubordination. The reputation and standing of the Cook County Asylum, which is badly enough in need of elevation, will not be helped by this proceeding.

VOLUNTARY COMMITMENT.—The New York Medico-Legal Society, at a recent meeting, adopted a resolution declaring that "the highest interests of the insane demand the incorporation of a law permitting voluntary admission to hospitals for the insane, among the statutes of the State of New York."

INSANITY AMONG FARMERS.—The often repeated statement, that seems to have captured the popular fancy, that farmers and farmers' wives are specially liable to insanity, hardly needs a contra-

diction to alienists. Dr. E. B. Lane finds that the proportion is twice as great in Boston as in towns under twenty thousand population, and that the ratio is about equal in small towns and in country districts.

Apropos to the above, the paragraph that has been going the rounds of medical journals, attributing insanity to early rising, is worth a comment. Dr. S. H. Talcott, of the State Homœopathic Hospital of New York, has the credit of originating this explanation of the prevalence of insanity in the farming community. If this cause of insanity has no better evidence in its favor than the prevalence of agricultural lunacy, it must be considered as on the whole a dubious one.

THE opening of the new McLean Hospital on October 1st was a notable event. A full illustrated description of this institution, by Dr. H. M. Hurd, is necessarily crowded out of this issue of the JOURNAL, but will appear in full in the April number.

THE STATE HOSPITALS' BULLETIN OF NEW YORK.—The following are extracts from a circular sent out by the editorial committee, Drs. P. M. Wise, S. H. Talcott, and Charles W. Pilgrim:

At a conference of State hospital superintendents with the State Commission in Lunacy, and after mature consideration, it was determined to commence the publication of a bulletin of hospital medical work in January, 1896, to be issued as a quarterly publication thereafter, until further action.

The Bulletin is to be known as the "State Hospitals' Bulletin." It is to be issued in January, April, July, and October, at least for 1896. Each number is expected to fill about 144 pages of solid small pica for text and, perhaps, leaded brevier for reports. It is to be octavo, or magazine, size of page. Its board of editors will comprise the superintendents of State hospitals, the director of the State Pathological Institute, and the president of the State Commission in Lunacy. Its collaborators will be the assistant physicians and medical internes of the State hospitals. The active work in the preparation of the Bulletin is relegated to an editorial committee elected annually from the board of editors. The committee, for the first year, is empowered to arrange the necessary details of publication. In case acceptable voluntary contributions are offered, no assignment of work is likely to be made, but if it proves that such contributions are not presented, the editorial committee is empowered to and will assign work to the several hospitals, for report at a time to be stated.

The Bulletin will be published at the State hospital printing department of the Utica State Hospital, under the supervision of a master of the art, and medical officers may rest assured that no medical periodical will exceed it in tastefulness of design and correctness of typography.

GEORGE GOUGH, an attendant at the Cook County Asylum, has recently been convicted of manslaughter for causing the death of a patient by brutal treatment, and, unless a new trial is granted, will be sent to the penitentiary under the indeterminate sentence act. Another attendant, who was also arrested for the same offense, has not yet been tried.

It is not creditable to an institution to have such trials of its employes necessitated, and it may be taken in this case, probably, as one of the results of the political management that has been too much the rule in the Cook County institution.

If crimes of this sort are committed, it is at least satisfactory to see punishment promptly follow.

SECOND MEETING OF THE ASSOCIATION OF ASSISTANT PHYSICIANS OF HOSPITALS FOR THE INSANE.

KALAMAZOO, MICH., October 24-25, 1895.

Dr. A. L. Warner called the meeting to order at 3 p. m., October 24th, and introduced the new president, Dr. Wm. A. Stone.

Dr. Edwards, superintendent of the Michigan Asylum of Kalamazoo, welcomed the association as follows:

"It is said that corporations have no souls. Perhaps for this reason some individuals are always ready to cry out against them, to take advantage of them, to filch from them, or to do things that they would scorn to do to another person. The State, to many people, is as soulless as a corporation. The asylum, being one of the charities of the State and not an individual enterprise, is likewise often an object for misstatements, unreasonable fault-finding, and many unjust criticisms. It is quite the fashion to criticise the asylums; indeed, since the somewhat noted strictures passed upon their management by an eminent but in some respects misinformed man, S. Weir Mitchell, I may say that it is a fad to criticise these institutions. It is held in some quarters that our asylums are expensive and, at the same time, poorly appointed; in other words, that they are gilded prisons but not hospitals for curative treatment; that the treatment is routine and unscientific, and that the appliances are clumsy and the methods in some respects barbarous. A popular distrust of asylums has thus been created, and this distrust has been aggravated by the unfounded or extravagant complaints of partially restored patients and other disaffected persons. The neurologist, gynecologist, and other medical brother, each in his special line, now finds it his pleasant duty to criticise asylum physicians. This they do with all the confidence that ignorance usually begets, and they proceed to point out the many shortcomings of the assistants, who, to believe some of their statements, are selected from the dullest and least promising of medical men. A writer, in a recent issue of the *Medical Record*, discourses on 'Routine Medication in Asylum Practice.' Let me quote from his article:

"To illustrate, let us take the ward physician in most any of our hospitals for the insane. They are mostly young men who have had little or no experience in general practice. They have treated some of the more familiar diseases, some of the epidemic diseases of childhood, have read some textbook on practice, and have a very hazy idea of the subject after all. If a patient is able to describe to him all his aches and pains, and lay before him a complete history of the case, then, according to rule 1, 2, or 3, he may pronounce the case one of asthma; whether caused from reflex nervous trouble or heart disease, he is not quite certain which. The various valvular lesions of the heart he has never had any clinical experience to enable him to distinguish, and the curious murmurs and turbulent sounds convey to his intelligence nothing of diagnostic value.

"And perchance it may be a lung trouble; here again the average ward physician is all at sea. The sound he hears may be all right or all wrong, but he could not be qualified to determine.

"I might quote further from this writer, but I think you will agree with me that I have cited him sufficiently. The quotation is a fair sample of the

entire article. The author ascribes the deplorable condition which he recites to the influence of politics in State institutions, and the only hope he sees is their separation from such vicious influence. That the condition he outlines may exist in some asylums is possible. That it exists in all, as he indicates, is a gross perversion of facts. We who have lived for any length of time in an asylum realize all too truly the tendency to get into routine ways and to be conservative in all matters. We need the stimulus of association with others to enable us to attain the best results. That such stimulus will be supplied to you by the meetings of this association, I am very confident. I know of no step recently taken in the medical work of asylums that promises more for good than the organization of this association and these meetings. It brings the gentlemen composing it together for exchange of thought and discussion of methods, and, as you meet from time to time at various institutions, your observations will be of benefit, alike to the asylum with which you are engaged and the one which you visit. No asylum possesses all the advantages. There are many things in our sister institutions which we would gladly copy at Kalamazoo, and many which we hope to be able to copy before long.

"I regret that we can show you no laboratory building that is well equipped in all particulars. We hope, however, to have such a separate building. In so many of our institutions the major efforts have been directed to the provision of further accommodations for patients, too often to the neglect of providing suitable appliances for scientific observation and treatment.

"I would suggest, if the matter has not already been provided for, that your secretary prepare a report of this meeting that shall show the objects of the association, character and amount of work done, and that such report be offered to some one or more of the leading medical journals for publication, as well as to the *AMERICAN JOURNAL OF INSANITY*, and such other special publication as you may elect. I think it eminently proper that the results of your meeting should be made known to the profession at large.

"It gives me great pleasure to most cordially welcome you to the Michigan Asylum for the Insane. I hope your deliberations may be of the benefit to you that I know they shall be to us."

The minutes of the first meeting (May, 1895) in Kankakee, Ill., were adopted as printed in the July, 1895, number of the *JOURNAL OF INSANITY*.

The following order of business was adopted, and is to be added to the by-laws: 1. Call to order. 2. Special communications. 3. Report of committees. 4. Election to membership. 5. Election of officers. 6. Unfinished business. 7. New business. 8. Regular programme (reading of papers, etc.) 9. Announcement of the next place of meeting, and of the next president.

A motion to the effect that the treasurer shall report at the annual meetings only, was adopted, and the word "annual" was inserted before "meeting" in Section 5 of the by-laws.

Dr. J. Morse moved that a section 9 shall be added to the by-laws, to the effect that the annual dues of each member shall be \$1. The motion was seconded and carried.

Dr. A. L. Warner moved that a resolution shall be prepared by the committee to the effect that the membership shall not be restricted to the assistant physicians of the States of Illinois, Iowa, and Michigan.

Dr. A. Meyer resigned the secretaryship on account of his moving to Worcester, Mass.

Dr. I. H. Neff was elected secretary and treasurer.

The following gentlemen were proposed to and elected for membership: Dr. H. R. Niles, Flint, Mich.; Dr. Albert M. Barret, Independence, Iowa; Dr. Arthur McGugan, Kalamazoo, Mich.

The evening session was opened at 8.15. There were present:

Members of the Association.—Dr. William A. Stone, Kalamazoo, Mich.; Dr. H. Ostrander, Kalamazoo, Mich.; Dr. H. D. Statler, Kalamazoo, Mich.; Dr. Arthur McGugan, Kalamazoo, Mich.; Dr. George C. Boody, Independence, Iowa; Dr. Grant G. Speer, Traverse City, Mich.; Dr. Jason Morse, Pontiac, Mich.; Dr. I. H. Neff, Pontiac Mich.; Dr. A. L. Warner, Kankakee, Ill.; Dr. W. G. Stearns, Kankakee, Ill.; Dr. Adolf Meyer, Kankakee, Ill.; Dr. H. R. Niles, Flint, Mich.

Guests.—Dr. William M. Edwards, superintendent of the Kalamazoo Asylum; Dr. H. B. Osborne and Judge A. J. Mills, trustees of the asylum; Dr. A. Hockstein, Dr. C. A. LaCrone, Drs. Robertson, Innes, Clark, McNare, Ames, Van Zwolunberg, and Snook.

The subject of the discussion of the meeting was "Degeneration and Its Study Among the Insane."

Dr. Adolf Meyer read a "Review of the Physical Signs of Degeneration."

Dr. George Boody gave a review of the "Deformities of the Jaws," based on his work done on the subject in connection with Dr. Talbot.

Dr. Ostrander demonstrated several interesting casts of palates of patients in Kalamazoo.

Dr. Neff next read a paper on "Some Cases Illustrating Physical Signs of Degeneration."

Discussion of preceding papers was general.

Dr. Boody suggested that a plan should be devised which would enable the members of the association to make uniform investigations of the signs of degeneracy among the patients and among the insane. This question was referred to the executive committee, and the meeting was closed.

THIRD SESSION—OCTOBER 25, 1895, 9 A. M.

1. The committee found best that the by-laws and constitution should not be changed with regard to the membership; but a resolution was suggested to the effect that the membership in this association be not limited to any one section of the country, but that we invite and welcome to it members of hospital staffs from all parts of the country. The further proposition was made that for the next meeting special and urgent invitations be sent to the individual members of the hospital staffs of Indiana, Ohio, and Wisconsin. It is understood that all membership is individual.

These propositions were seconded and accepted.

2. Concerning the plan for a study of degeneration, it was proposed to have the papers read arranged so as to form a preliminary outline, and pub-

lished at an early date. More definite plans could be laid down at the next meeting, after the methods have been tried.

This proposition was discussed and accepted.

Dr. Warner read a paper on "The Bodily Weight in Melancholia." In the discussion, which was general, special attention was paid to the question of artificial feeding and its indications and contra-indications.

The papers of Dr. Boody, "A Case of Rupture of a Kidney"; of Dr. Neff, on "The Use of Electricity in the Treatment of the Insane"; of Dr. Morse, on "Two Cases of Degenerative Insanity"; and a communication of Dr. Meyer, on "A Case of Sulfonal Poisoning," were read in title only, owing to lack of time.

As the place of the next meeting — Independence, Iowa — was announced, following invitation of Dr. G. H. Hill, the superintendent of the Independence Hospital for the Insane, Dr. Doolittle was announced as president.

After a vote of thanks to Dr. Edwards and to the staff of the Kalamazoo Asylum, the meeting adjourned.

CORRESPONDENCE.

We have received the following communication from Dr. D. E. Hughes, chief resident physician of the Philadelphia Hospital :

THE INDIGENT INSANE IN PHILADELPHIA.

It has ever been one of the misfortunes of many who have worked honestly in their particular field of duty to have the earnest and more or less successful efforts of years ignored by those unfamiliar with the facts, but who have gained the public ear, through the "press" or the "magazine," in the attempt to foster themselves with the public as reformers. To some of these, often heretofore unknown, writers, reputations, results, and facts count as naught if they in any way conflict with their preconceived views, or the objects wished to be attained by their paper. The destroyer of reputations, however, has long since been given his place in the minds of honest people. These are some reflections resulting from a perusal of an article in the October number of the *North American Review*, by Dr. Henry Smith Williams, entitled, "Politics and the Insane."

All that Dr. Williams says concerning the condition of the indigent insane in New York and in Chicago may be true, and if so is an awful reproach upon those communities; but the failure of these or other cities to comply with the claims of humanity in the care of the indigent insane does not justify an untruthful attack upon the insane department of the Philadelphia Hospital, as contained in the following extract from the article mentioned:

The practical results of the political methods of caring for the indigent insane of Philadelphia may be told in a few words, which I quote from a personal letter, written by one perfectly familiar with the facts: "The present system consigns the insane to wretched, crowded, dark buildings, that have been odious and odorous for half a century, with no facilities for suitable out-of-door exercise or occupation. The plans and grounds of the asylum belong to a period long past, and within the buildings the allowance of fresh air equals but a few square feet per patient. All in all, the condition of the insane here is one of the saddest spectacles to be seen in this country. Yet the politicians have obstinately resisted every effort for improvement."

The writer has had charge of the insane department of the Philadelphia Hospital for nearly six years, and most emphatically pronounces every word and line of the above quotation untrue.

It has become quite a fad in recent years for several Philadelphians, whom the public respect for their honesty and fair play, to refer to the Philadelphia Hospital as it *may* at one time have been, and not as it *is* to-day. These individuals can not think it possible that while they have developed and grown, "Old Blockley," too, has felt the spirit of the times, and also grown and developed, and that, too, without their aid or, in fact, knowledge, and yet candor compels the assertion.

The consulting staff of the insane department of the Philadelphia Hospital is composed of the following well-known and distinguished neurologists and alienists, who have sent the directors of the hospital the letter following, viz: Dr. Charles K. Mills, Dr. Wharton Sinkler, Dr. F. X. Dercum, and Dr. J. Hendrie Lloyd:

PHILADELPHIA, November 12, 1895.

To the Directors of the Department of Charities and Correction:

GENTLEMEN: The attention of the neurological staff of the Philadelphia Hospital has been called to an article in the *North American Review* for October of this year, in which certain statements are made which reflect on the condition and management of the insane department. As this is a part, officially, of the neurological department, we feel it our duty to express to your board our sense of the falsity and injustice of these statements. As we have all been for a number of years connected with the hospital, and as our duties have necessarily made us familiar with the construction and sanitary arrangements of the buildings, the care and treatment of the patients, and the conscientious fulfillment of their duties by the directors, superintendent, and physician-in-chief, we feel that we are in a position to condemn, in the strongest language, the unfounded aspersions which have been made by one who is certainly uninformed as to the facts about which he writes, and who is evidently willing to accept without verification the statements of a correspondent who is ignorant as to the present condition of the hospital. The directors and officials have been untiring in their efforts in behalf of the insane. As a staff we have been uniformly supported in our efforts, humane and scientific, to advance the standing of the hospital.

Very respectfully yours,

CHAS. K. MILLS,
F. X. DERCUM,
WHARTON SINKLER,
JAMES HENDRIE LLOYD.

The following extract, from the report of Hon. Mahlon H. Dickinson, president, and Hon. Cadwalader Biddle, secretary and general agent of the Board of Public Charities of Pennsylvania, sustains the writer in his assertion of the untruthfulness of the foregoing extract from the *Review*:

The undersigned, on October 30, 1895, made their annual visit of inspection to the Philadelphia Almshouse.

* * * * *

The premises occupied by the insane have been, for the most part, recently erected, and upon plans approved by the Committee on Lunacy of the Board of Public Charities. Ample provision for light and ventilation was the first consideration of the committee, and these have been satisfactorily attained. The older buildings for this unfortunate class have been modernized, and supplied with all the appliances deemed necessary for the successful treatment and care of the insane.

* * * * *

The insane department is under the management of Dr. Daniel E. Hughes, the chief physician of the almshouse, and his assistants, and has a corps of eighty-eight male and female trained nurses.

Our visit of inspection to this institution was, as usual, made without any notification of the officials. Hence it was found in its general condition, and it reflected great credit on Mr. Charles Lawrence, the superintendent, and his subordinate officials and employes. Indeed, Mr. Lawrence has shown himself, in our opinion, preëminently qualified for the office he fills, and we believe him to be "the right man in the right place."

(Signed) MAHLON H. DICKINSON,
President.

CADWALADER BIDDLE,
Secretary and General Agent.

The following extracts from a report of the chairman and secretary of the Committee on Lunacy of the Board of Public Charities of Pennsylvania is presented with feelings of pride:

PHILADELPHIA, November 5, 1895.

HON. MAHLON H. DICKINSON, *President Board of Public Charities of Pennsylvania:*

DEAR SIR: The Committee on Lunacy have been requested to examine into the present condition of the insane department of the Philadelphia Hospital, Blockley, and to report to the Board of Public Charities. The committee having carefully inspected that department, respectfully present the following report:

"On November 4, 1895, there were present in the department for insane 1,132 patients, or 570 men and 562 women. These, being wholly drawn from the poorer classes of a large city, are more difficult to manage than the average State hospital population, and present, physically and mentally, very poor material for cure or relief. Notwithstanding this fact, the percentage of recoveries on the whole number treated, for the year just closed, was 8½ per cent; on the number admitted during the year, 28 per cent. In the State hospitals of Pennsylvania, in 1894, the percentage of recoveries on the whole number treated was 4 per cent; on the number admitted during the year, 21½ per cent. These results require no comment.

* * * * *

"It has been stated elsewhere that the air space per patient in this hospital

is very inadequate. This is not true. The unusual height of ceilings, width of corridors and ample proportions of single rooms and dormitories in these buildings, with a good system of ventilation, affords larger air space per patient than is found in the average general hospital. All the water closets and bath rooms are placed in towers or projections built outside the wards. These are well ventilated, perfectly clean and free from odor, and are supplied with excellent fittings and an automatic flush of water.

"All the patients sleep upon wire-woven mattresses, on neat iron bedsteads, supplied with good warm clothing. * * * The quieter patients sleep in large congregate dormitories, which are entirely vacated during the day, the patients, when not in the open air, occupying large day rooms. The ceilings in most of the wards, corridors, day rooms, and dormitories are from thirteen to sixteen feet high.

"The newer wards have always been excellent, but during the last few years all of the older wards have been torn out to the very walls and refitted in modern form, so that now these compare very favorably with the newer portions of the buildings.

"The patients take their meals in one of the finest and best equipped congregate refectories in this country, connected with serving rooms and a main kitchen of great size, and fitted with the most approved appliances for institution cooking. This group of buildings is of recent construction. * * * Of the 1,132 patients about 900 regularly use this dining hall. On the day of our last visit there were 897 at dinner. * * * The general cleanliness of the wards is admirable; there are no bad smells, no dirty corners nor closets, no collection of rubbish. All spare clothing is neatly put by in clothes-rooms. The patients are bathed regularly, under supervision of physicians; are kept clean, and their clothing is warm, tidy, and comfortable.

* * * * *

"In good weather the wards are quite deserted, except for the sick and feeble, the patients being most of the time in the open air. * * * All the patients who are able to be out have considerable yard space in which to exercise.

"We know of no public hospital for the insane in this country that has a better medical staff or a better medical service than has the department for insane of the Philadelphia Hospital.

* * * * *

"The supplies of diet, drugs, medicines, and appliances are unrestricted and are subject to the requisition of the physician-in-chief. Politics are absolutely disregarded in the selection of physicians, and in the employment of attendants and employees. Character and fitness for duty are the sole requirements to obtain and retain an appointment or a position. Much to the contrary has been unfairly alleged. It might have been so at one time; it is so no longer.

"The entertainment, occupation, and useful (as well as directly profitable) employment of the insane patients are now, and long have been, special features of the administration of this department of the Philadelphia Hospital. * * * All the clothing used by the insane, both under and

outer, with the exception of shoes, stockings, and hats, is manufactured by the patients in the tailor shop and in the sewing rooms and circles in the wards. This employs both men and women. The men also conduct a brush shop, where a large quantity and great variety of excellent brushes are produced, far in advance of the requirements of the institution. * * * Other shops are to be opened soon for the making of brooms, whisks, mats, rugs, etc., as soon as accommodations can be furnished. * * * All the domestic work is done by the patients, and much miscellaneous jobbing. * * * On the date of our recent unannounced and unexpected visit there were usefully employed 514 insane patients, or 232 men and 282 women, or over 45 per cent of the patients.

* * * * *
 "The buildings are heated partly by direct, partly by indirect, radiation of steam, and are always comfortably warm in winter. The direct radiator stacks or coils are carefully protected by heavy wire screens, fixed in place, but capable of being moved. * * *

"This report, which is based upon repeated personal inspections by the Committee on Lunacy, was called forth by the injudicious, unjust, and untrue publication which recently appeared in a justly popular periodical. There are many citizens and many of the medical profession who appear to content themselves with the remembrance of what 'Blockley' used to be, rather than take the trouble to visit it now and see what it has become under the leadership of the present Bureau of Charities of Philadelphia, and under the control of the present superintendent, Mr. Charles Lawrence, and Dr. Daniel E. Hughes, the present excellent chief resident physician, and of the medical staff at large. The present improved state of the department for the insane could never have been attained without the thorough coöperation and determination of those in control and those in immediate charge. The results have only to be seen to be fully appreciated and highly commended. The improvement has steadily advanced, and will doubtless continue from year to year. It is true that the insane poor of this city should be quartered in a new and modernly appointed hospital, on a rural site, with a large farm and gardens attached; but this is not to be attained by insisting upon untrue statements, nor by refusing to see that the most is being made of the present site and of the means now at hand. This report has shown that the insane poor of this city are as well cared for at 'Blockley,' in the present improved state, as are the patients in any other public hospital in Pennsylvania.

"Respectfully submitted,

"(Signed) GEORGE I. McLEOD, M. D., *Chairman*.

"HENRY M. WETHERILL, M. D., *Secretary*."

If it were not for want of space in this article, the entire report of the Lunacy Committee would be given, instead of only such portions as refer to the particular libel published in the *Review*.

The following extracts are taken from an editorial published in the *Medical News* of November 23, 1895:

Under this title ("Politics and the Insane") Dr. Henry Smith Williams has contributed a popular article to the *North American Review*, in which he

makes an indiscriminate attack upon the management of the insane by the "politicians." The tenor of Dr. Williams' article is in accord with that of a species of writing now rather common, in which there is a tendency to decry anything that is suggestive of "politics." In a country so devoted to politics as our own — one, in fact, whose institutions are essentially founded on popular government — this outcry against everything political has seemed to us illogical and unwise. It is not only dangerous to the country at large, but sooner or later leads those who indulge in it into reckless misstatements of facts and into a pharisaical condition of mind which unfits them for forming impartial judgments. Dr. Williams' article suggests these thoughts both by its tone and by its matter.

We are not concerned here, however, with anything that Dr. Williams has written, except his unjust onslaught upon the present management of the Philadelphia Hospital. He has evidently taken no pains to make a personal inspection of the institution or to verify his alleged facts, but has relied largely upon a letter from an unnamed writer, whose statements, to say the least, are highly colored.

* * * * *

The exact facts about the present management and condition of the insane department of the Philadelphia Hospital are far other than those described in these exaggerated and misleading statements. After the disastrous fire of a few years since, the old buildings for the insane were largely rebuilt and entirely renovated. New wings and additions, including a model kitchen, have since been erected, and the whole atmosphere and appearance of the institution have been changed. The new additions, costing \$229,000 (more than a quarter of a million dollars), were erected three years ago, and have been pronounced, by competent judges, satisfactory in every way. * * *

This hospital has what no other State hospital has in equal degree, sitting rooms for day, distinct from sleeping rooms at night. It has a splendid dining hall, 220 x 100 feet. * * * It has larger airing-courts than any State hospital, although, of course, it is without much land for farming or trucking. Over 50 per cent of the patients are usefully employed.

This hospital takes from the dregs of a great city, and its population in consequence is physically much below that of the State hospitals; yet its patients make almost all their own clothing, for both men and women, and in addition there are shops for making brushes and repairing shoes. Finally amusements are given regularly in a large assembly room.

The condition of the insane is always a sad spectacle, but it is no sadder at the Philadelphia Hospital to the eye of a true alienist and lover of justice than it is in any gilded asylum in the land.

* * * * *

We do not hesitate to say that the insane department of the Philadelphia Hospital, under its present management, compares favorably in cleanliness, hygienic conditions, and general welfare of its patients with any State hospital, and that the authorities, who have had much to contend with, including popular prejudice, are deserving of great credit for what they have accomplished. The truth is, this hospital suffers from a bad reputation which it acquired years ago, before the improved management under the new city

constitution made it what it is to-day. Dr. Williams and others, who, like him, do not take the pains to verify their "facts," simply repeat old calumnies which no longer have a basis.

The Philadelphia Hospital is a great public charity, which for years has been one of the most important centers for teaching and for medical science in this country. Those who criticise it should at least make themselves familiar with the facts.

* * * * *

Because these abuses abound in New York and Chicago, it does not follow that they occur in Philadelphia, and no upright judge will claim they do occur at present in the Philadelphia Hospital.

The *Review* article brought many letters from those who are familiar with the changes of late years in the condition of the hospital in question, but the testimony here given must convince the readers of the JOURNAL that both Dr. Williams and his unknown correspondent have done a gross injustice to a great public charity, for which there can be no possible excuse, and will cause the knowing ones to question how much truth there is in any of his statements concerning the other hospitals he so unmercifully condemns. "False in one, false in all," is a familiar quotation that occurs in this connection.

We have been favored with the following correspondence, which explains itself:

BOSTON LUNATIC HOSPITAL, No. 39 NEWBURY STREET,

BOSTON, November 17, 1895.

Editors American Journal of Insanity:

GENTLEMEN: The following correspondence explains itself. If you do not care to print it entire you can use such parts as you choose:

BOSTON, October 20, 1895.

DR. EDWARD COWLES, *Superintendent McLean Hospital:*

DEAR DOCTOR: In pursuance of my intention, expressed some time ago, I now write to ask your advice. After fifteen years of persistent effort I have seen my plans for the proper care of the insane of Boston largely successful. While taking some credit for this success, perhaps I am to blame for their partial failure. We can now care for nearly half of the city's insane. I am now in charge of the hospital department only. It was planned for the treatment of 170 curable cases, and it has, to day, only two patients of this class, being entirely filled with chronic cases. All the recent cases still go to the State hospitals as formerly. The group still lacks an administration building and superintendent's residence, and the grounds are in their original condition of pasture land.

Perhaps I have unconsciously passed the limit of my usefulness to the city. I am only fifty-eight years old, and do not feel any diminution of strength due to age. It is a difficult question, however, for a man to determine when he should retire from public service. Perhaps some one else should plan the remaining buildings to be constructed here. The interests involved are official, and family as well as personal, and I feel the responsibility of deciding to be great.

Will you please call on Dr. Jelly and, in the absence of Dr. Rowe, on Dr. Quinby to advise with you in the matter?

Yours very truly,

THEO. W. FISHER.

MCLEAN HOSPITAL,

SOMERVILLE, MASS., October 24, 1895.

DEAR DR. FISHER: I have been considering the matter of your letter, and recent conversations with me, referring to the intention you have had in mind for some time of giving up hospital work.

In accordance with your request, that three medical consultants should join in giving you impartial advice in a friendly way, I have complied with your wish that Dr. Jelly and Dr. Quinby, in the absence of Dr. Rowe, should consider the matter, together with myself. But Dr. Quinby not being readily available, Dr. Jelly and I, with your approval, have conferred upon the questions you have asked.

We appreciate what you say of the difficulty in deciding so important a matter under the circumstances and obligations that concern yourself and family and your official position, and involves a great responsibility.

With our observations of what seems to us desirable and expedient in reference to your health in recent years and those to come, and from what you have told us in regard to your health and business affairs, we do not hesitate to advise you that the plan entertained by you in the last year or more, for retiring to a mode of life that is likely to prolong it for you, is the plan for you to adopt.

It is with great regret that Dr. Jelly and I contemplate your retirement from the field of your active hospital work after so many years of honorable usefulness, and we heartily join in wishing you many years of enjoyment of the fruits of your labors.

Very sincerely yours,

EDWARD COWLES,

GEORGE F. JELLY.

I accordingly resigned at once. On November 10th a farewell reception was held in the chapel at Pierce Farm. An autobiographical sketch was read by the retiring superintendent. Many friends were present, and a dinner service presented in an eloquent address by a lady patient.

Yours very truly,

THEO. W. FISHER.

NEW YORK, November 6, 1895.

Editors American Journal of Insanity:

MY DEAR SIR: The October number of the *British Journal of Mental Science*, in commenting editorially on the report of a committee of the Medico-Legal Society of New York, on the amendments proposed to the law of commitment of the insane in the State of New York, says, speaking of the report:

It recommends that no order for the commitment of a lunatic—reception order, as we should style it—shall be made until after *a trial by jury*, at which the lunatic *must be present*, unless the judge otherwise directs, and *must be represented by counsel*.

And the article proceeds to characterize the report and the action of the committee as “monstrous,” “grotesquely absurd,” “preposterous,” etc.

The article was written under an entire misapprehension as to the facts, and as to what the report contained.

No recommendations of the kind stated were made in the report.

The report contained the amendment proposed by Mr. Albert Bach in *extenso*, and the act of the Legislature as it now stands on the statute books of that State.

The following resolutions were unanimously adopted at a regular meeting of the Society:

1. *Resolved*, That the present law is faulty in permitting any citizen to be committed and confined in an asylum, public or private, or in any institution, home, or retreat for the care and treatment of the insane, upon the mere certificate of two physicians under oath.

2. *Resolved*, That such a commitment made in this manner, before it has been approved by a court or judge of competent jurisdiction, is in direct violation of the organic law of the State and of the United States.

3. *Resolved*, That the qualifications specified in the law, as it now exists, as to the competency of the certifying physicians, requiring only three years' actual practice of his profession, and without requiring evidence of his experience in or practical knowledge of insanity, are entirely inadequate to protect the liberty of the citizen.

4. *Resolved*, That the statutory qualifications of the certifying physicians, as now stated in the law, would not be sufficient to enable said physician to testify as an expert in a court of justice where the question of insanity was at issue.

5. *Resolved*, That, in our opinion, confinement of the insane in an asylum is not necessary, beneficial, or even prudent in all cases; and that before a judge signs a warrant of commitment the law should require him to be satisfied, by competent evidence, that the insane person, if at large, would be dangerous to himself or others, or that treatment in an asylum would be beneficial to him.

6. *Resolved*, That in all cases of doubtful insanity, judges, before signing warrants of commitment for insane persons, should assign counsel for the alleged lunatic when he is not otherwise represented.

7. *Resolved*, That, in our opinion, in the matter of commitment of the insane, the duty of medical men should be limited to giving medical evidence, and the responsibility for the commitment should rest upon the judge, and not upon the physician; that the medical profession has greatly suffered in public estimation by the practical working of the existing law, which throws upon the certifying physicians the opprobrium of unfortunate or ill-advised commitments.

The committee made no such report as is stated in the *Journal of Mental Science*.

It, in fact, refused to recommend the amendments in that regard, as proposed by Mr. Bach, and it is difficult to imagine how such an error could have been made in a journal of such high character as the *Journal of Mental Science*.

I inclose, under separate cover, the full report of the committee, and as the *Journal of Mental Science* is a quarterly, and no issue will appear for some time in which the correction could be made in that journal, I deem it only proper to call your attention to the error in order to prevent its wider circulation unexplained.

I remain, dear sir, very faithfully yours,

CLARK BELL,
Chairman of Committee.

HALF-YEARLY SUMMARY.

The SUMMARY for January, 1896, presents the usual indications of advancement and progress taking place in our American institutions. The most noticeable and gratifying feature of current events is the movement for MORTUARY BUILDINGS and LABORATORY EQUIPMENT. What was once exceptional in this line, if not already a matter of course, is coming to be so. It has been a long and hard struggle to educate State legislatures to a sense of the value and importance of pathological work and laboratory equipment, but soon we predict separate buildings for this purpose will be provided quite generally. We record steps in this direction in the present SUMMARY in Maryland, New York, Washington, and Indiana, for the illustration of the latter of which Dr. Edenharter has furnished the necessary cuts.

The principle of STATE CARE is progressing, as shown by reports from California, Iowa, and Indiana.

INDUSTRIAL BUILDINGS are being added in many States, as Iowa and Colorado.

Addition of MEDICAL INTERNES to the regular staff is recorded in New York, Michigan, and Illinois. This is a movement of great value and importance.

New institutions are provided for in many States. Illinois has appropriations for the erection of two.

It is to be regretted that the Republican party, in coming into power in Kentucky, seems to force upon the Governor a political overturning in all the State institutions. The JOURNAL would like to see Governor Bradley insist on retaining all meritorious officials and employes.

Several institutions have very creditable printing equipments. The hospitals of Iowa, at Independence and Clarinda, send out, regularly, a monthly magazine with much spicy and well-chosen material, calculated to interest its readers. Gala numbers of each were printed for the holiday season. The printing office at Utica is famous historically and otherwise.

CALIFORNIA.—*State Asylum for the Insane, Napa.*—At the last election of officers for this asylum the entire medical staff, consisting of Dr. A. M. Gardner, resident physician, and Drs. L. F. Dozier, G. R. Bowles, and Driesbach Smith, assistant physicians, was retained.

During the last four years there have been a number of important improvements made in the hospital buildings, among them being a commodious stone kitchen, which is separated from the main building. The expense incurred was paid out of the contingent fund, the rock was obtained from quarries belonging to the institution, and patient labor was largely employed in the construction of the kitchen. The cost was thus reduced to less than one-fifth of what it would have been had the work been performed by outside contract.

The old kitchen, butcher shop, etc., which were in the main building, have been fitted up for a ward and a tailor shop in which is made all the clothing worn by indigent patients. Home labor is utilized here also, with the most gratifying results, both in the matter of economy and in the beneficial effect of the regular employment upon the inmates. Three of the men, who were considered refractory and dangerous, have been steadily at work for the past seven months, and are now among the most happy, quiet, and contented of the patients.

During the past eighteen months 900,000 brick have been burned, and some of them used in the construction of a carpenter shop, 40 x 60, completely fitted with tools. Here is turned out almost anything in the line of ward furniture. At present the patients are constructing frames for 300 pictures for the wards.

An additional brick building for laundry purposes is in process of construction, and the old laundry is being remodeled, all being done by patient labor. A bowling alley and gymnasium, with shower baths, etc., are in contemplation.

Dr. Gardner believes that much more can be accomplished by the institution of the future in the line of self-support than is now attempted, and says that no possibility of development in that line should be left untouched, both on economic grounds and as a means of accelerating the recovery of the patient. Hon. Jas. H. Budd, Governor of California, is of the same opinion, and has addressed a circular letter to the State institutions containing the following paragraph:

"It is the Governor's desire that you report to him what, if any, products you raise, or goods or articles you manufacture, in excess of the needs of your institution, and what would be the cost of furnishing other State institutions with the same, making a reasonable allowance to your own therefor. This letter is addressed to the State institutions and officers in the belief that, through mutual effort and harmonious action, taxation may be lessened, economic measures encouraged, and the people of the State made to realize that their public servants are earnestly engaged in an effort to lighten their burdens and promote the public welfare."

—Nothing more important in California asylum matters has occurred for a long time than the meeting of the trustees and superintendents of the various institutions which was called by the Governor in the latter part of November. A thorough discussion resulted in the appointment of a committee consisting of the State Board of Examiners (the Governor, the Attorney-General, and the Secretary of State), one member from each of the boards of trustees (the member of each board to be selected by the individual board), and the superintendents. The committee is to devote the next year to a thorough investi-

gation and canvass of all matters connected with asylums, their government, etc., and it is believed that a bill can be presented to the next State Legislature providing for the uniform government and administration of asylum affairs.

ILLINOIS.—Rock Island has been made the location for the new Western Hospital for the Insane. The newly appointed trustees and the Governor met on December 9th, to consider the bids of the three competing places — Monmouth, Galesburg, and Rock Island — and decided in favor of the last-named city.

Rock Island gave 410 acres of land situated near the Mississippi River. Part of the chosen site (about 150 acres) is located upon a high bluff, overlooking the river and in view of the three cities of Rock Island, Moline, and Davenport. The remainder of the land is level. The amount of money at the disposal of the trustees is \$100,000, appropriated by the last Legislature.

The announcement that the East Moline, or Watertown, site had been chosen by the commissioners for the location of the new Hospital for the Insane was greeted with the ringing of bells, the sounding of the water-works whistle, and a general jollification by the citizens. The site is unquestionably the finest in the State.

The trustees of the Western Insane Hospital (created by the last General Assembly) are W. Selden Gale of Galesburg, John M. Eden of Sullivan, and Thomas Silvas of Rock Island.

—A State institution for the chronic insane has been located at Peoria.

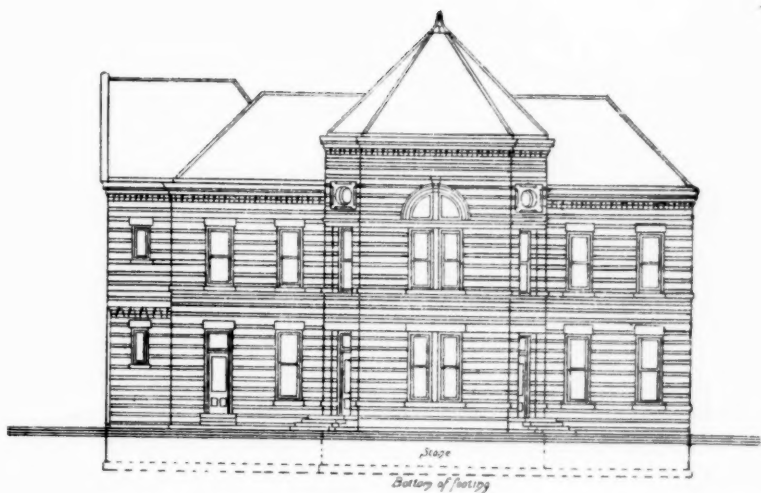
—Dr. W. G. Stearns succeeds Dr. Adolf Meyer as pathologist at the Kan-
kakee Hospital, Dr. Meyer having resigned and taken a similar position at Worcester, Mass.

INDIANA.—*Central Indiana Hospital for the Insane.*—Although this institution received no special appropriation during the last fiscal year, the trustees were enabled to construct and equip a new kitchen in the department for men. A fireproof laundry was erected and furnished with the latest machinery; also an addition to the fire department, providing sleeping accommodations for thirty-five men (outside employes). The minor improvements have been many.

The most important addition to the hospital is a pathological department and mortuary in charge of a competent pathologist, of which the accompanying cuts give a good idea. When the medical service is reorganized it is the intention to hold daily meetings of the staff, to hear reports and consult about hospital cases in the apartment provided for this purpose. All specimens will be stored in this pathological department and properly labeled. The records will show previous and clinical history as well as the pathological development. The building will be equipped with all necessary facilities to meet the most exacting demand of pathological investigation, and physicians will be invited to be present at post mortems and to participate in the discussion concerning treatment of cases.

Dr. George F. Edenharter, superintendent, says:

“Our appropriation for maintenance and current expenses was \$85,000 for the fiscal year ending October 31, 1895, and all of this was expended with the exception of \$15.05. With an increased number of patients, and neces-

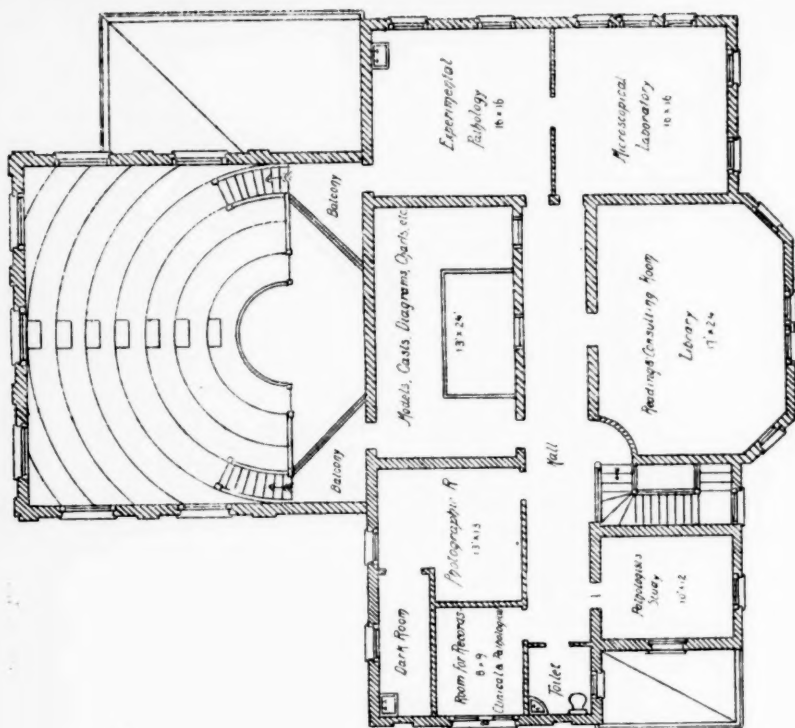
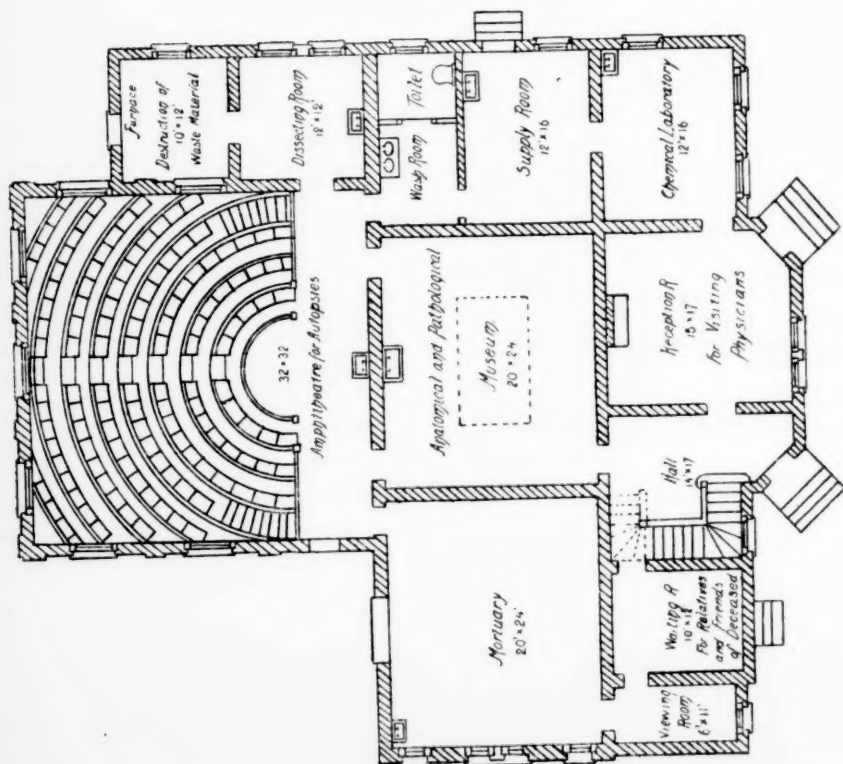


East Front



South Front

PATHOLOGICAL BUILDING, CENTRAL HOSPITAL FOR INSANE, INDIANAPOLIS, IND.



First Floor
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sarily an increase in expenditure, the General Assembly, in its wisdom, decreased this appropriation for the next two years, limiting us to \$76,500 for each fiscal year."

—*Southern Indiana Hospital for Insane, Evansville.*—An appropriation of \$30,000 was made available by the General Assembly of this year for enlarging the capacity of the hospital. The building is three stories with basement and attic, and is on the same general plan as the present building, with which it is connected at the northwest wing by a colonnade of three floors. The capacity of the addition will be 150 beds, and there are now on file more than 300 applicants for admission. The building will be ready for occupancy June 1, 1896. The contract price of \$30,000 includes everything except furnishing.

A very handsome portico of two stories, surrounding two sides of Administration Building, is nearly completed at a cost of \$2,800.

The interior of the house has been repainted, and the floors of all bath rooms and water closets relaid with encaustic tile. All windows needing it, nearly 600, have been weather-stripped.

Three hundred shade trees of the finest varieties have been replanted. These trees are two years of age and many of them are twenty feet in height and from two to three inches in diameter.

Several thousand feet of walks and roads have been added to the grounds, which are now well provided with avenues.

A new lake has been completed, finishing, for the present, our chain of lakes, four in number, and all of respectable size.

An additional line of water pipe was laid, so that the lawns, trees, and gardens have now an abundant supply of water.

The results from farm, garden, and piggery have been good, these animals being kept without cost to the institution.

Twelve large music boxes, one small magic lantern, a large stereopticon, and a gymnastic apparatus have been added to the equipment for the patients.

Dr. A. J. Thomas, superintendent, adds the following statement to his report:

Total number of patients admitted, discharged, and died during the fiscal year ending October 31, 1895:

Remaining over October 31, 1894—Men, 207; women, 217; total, 424.

Admitted during 1894-1895—Men, 44; women, 30; total, 74.

Total number treated during 1894-1895—Men, 251; women, 247; total, 498.

Discharged during 1894-1895—Men recovered, 17; men improved, 1; men not insane, 1; total, 19; women recovered, 8; women unimproved, 3; women not insane, 1; total, 12.

Died during 1894-1895—Men, 19; women, 12; total, 31.

Total discharged and died during 1894-1895—Men, 38; women, 24; total, 62.

Remaining over October 31, 1895—Men, 213; women, 223; total, 436.

Per cent of deaths on total number treated 1894-1895—6.2.

Per cent of recoveries on total number treated 1894-1895—5.2.

Per cent of recoveries on total number admitted 1894-1895—35.

Average number of men present during 1894-1895—199.

Average number of women present during 1894-1895—202; total, 401.

—*The Eastern Indiana Hospital for the Insane, Richmond.*—The Legislature of 1895 appropriated \$50,000 for increasing the capacity of this institution. It has been expended in the erection and equipment of a large general kitchen and two associate dining rooms. It will be remembered that this hospital was constructed on the cottage plan. The patients occupy twelve cottages, with a total capacity of 440 beds. Each cottage was equipped with a kitchen and dining room. After an experience of five years, the management has seen fit, in the interest of economy and convenience, to abandon the small cottage, kitchens, and dining room, except in infirmary cottages, and to erect associate dining rooms and a large general kitchen. The small dining rooms will be converted into day-rooms and dormitories, thereby increasing the capacity about 125 beds. The new building will be ready for occupancy at the beginning of the new year.

Dr. W. S. Tomlin, junior assistant physician, has resigned to enter general practice in Indianapolis. The vacancy was filled by the appointment of Dr. F. F. Hutchins of Indianapolis.

The law enacted by the last Legislature, in which there is an explicit recognition of the merit system in the management of the charitable institutions, is proving in its operations eminently satisfactory. While Indiana's benevolent institutions have not, during many years, been seriously disturbed by political interference, the embodiment of this fundamental principle of successful management into statutory law is a long step in the right direction, is wholesome and there is even now apparent a sense of protection about the institutions heretofore unknown.

Dr. S. E. Smith, the medical superintendent of this hospital, as chairman of the Committee on the State Care of the Insane, at the annual conference of Indiana Charities and Corrections, recently held at Fort Wayne, read a paper upon the "State Care of the Insane," in which was advocated the need and wisdom of State provision for all the indigent insane. It was shown that the increase of insanity in Indiana, during the past decade, was only relative and not actual. The proportion, ten years ago, was one insane to 600 of population and it is now the same. Under existing laws three of the four hospitals do not discharge patients until recovered, while one *may* discharge chronic cases to make room for recent cases. Legislation has been generally in the direction of State care, and it seems that the day is not far distant when Indiana will have a complete system of this kind of care. Even now there are only 350 patients in the State unprovided for, and an outlay of \$100,000 will make the desired provision for this number.

With the firm establishment of the merit system upon a legal basis, supported by popular approval, and an encouraging prospect of an early completion of a State-care system, the future of Indiana's hospitals for the insane is certainly bright.

IOWA.—*Iowa Hospital for the Insane, Independence.*—The staff of this hospital has recently been reorganized on account of the resignation of the first assistant, Dr. M. Nelson Voldeng. Dr. Voldeng and the third assistant, Dr.

Jacob W. Wells, have given up hospital work in order to study in Germany. Dr. John C. Doolittle, formerly second assistant, has been promoted; Dr. George Boody, formerly assistant at the Illinois Eastern Hospital for the Insane at Kankakee, is second assistant; Dr. Albert M. Barrett, a recent graduate of the medical department of the Iowa State University, is third assistant physician and pathologist; Dr. M. C. Mackin, who had been druggist for one year in this institution, is now fourth assistant physician.

During the past year the hospital has been supplied with a slaughter house having cold storage attachment.

—*Iowa Hospital for the Insane, Mount Pleasant.*—Since the last issue of the JOURNAL this hospital has completed an industrial building for men which will include carpenter shop, broom shop, mattress shop, boot and shoe shop, and room for repairing tinware, together with a drying room for lumber and storage. Several wards and apartments of the asylum have been recently decorated.

—*Iowa Hospital for the Insane, Clarinda.*—Dr. C. A. Drew, first assistant physician, resigned October 1st, and enters practice in Des Moines, Iowa. Dr. H. E. Markham, second assistant physician, resigned October 1st, and enters practice in Storm Lake, Iowa. Dr. Charles F. Applegate, third assistant physician, was promoted to first assistant physician. Dr. Anne Burnet of Aurora, Ill., late of Kankakee Hospital, was appointed second assistant physician. Dr. Alfred T. Gundry, late of the Gundry Home, Baltimore, was appointed third assistant physician.

—*New Hospital for Insane.*—The commission for locating and building the new hospital at Cherokee, in Northwestern Iowa, held a meeting recently to look over plans for rear center and boiler and engine house. The commission, as originally appointed, was as follows. In the law passed authorizing the new hospital, the superintendents of the three hospitals already in operation in the State were ex-officio named as members of that commission and three additional members were to be appointed by the Governor. The six commissioners were as follows: Col. Jed Lake, Independence, Iowa; Gen. Ed. Wright, Des Moines, Iowa; Hon. W. G. Kent, Fort Madison, Iowa; Dr. H. A. Gilman, superintendent Hospital for Insane, Mount Pleasant, Iowa; Dr. G. H. Hill, superintendent Hospital for Insane, Independence, Iowa; and Dr. F. C. Hoyt, superintendent Hospital for Insane, Clarinda, Iowa. General Wright, after serving faithfully as commissioner, died last week, and Hon. E. H. Conger has been appointed by the Governor to fill the vacancy.

The commissioners hope to expend \$100,000 a year upon this new institution, and to have a portion of it ready for occupancy within four or five years. Contractors are asked to make bids for laying the foundation walls during 1896. Both the outgoing and incoming Governors are in favor of State care for all the insane.

KENTUCKY.—A radical change may be expected in the management of all the charitable institutions of this State, as the first Republican Governor was installed December 9, 1895.

—The Western Kentucky Lunatic Asylum has completed a very satisfactory system of water works.

—Substantially built additions to the Central Kentucky Asylum make the present capacity of that institution more than 1,500.

—The Eastern Asylum has recently erected an addition which accommodates more than 100 patients.

MARYLAND.—*Maryland Hospital for the Insane, Spring Grove.*—Dr. Rohé, superintendent of the Maryland Hospital for Insane, in his annual report for the current year, says:

The difficulty in securing a suitable site for the additional hospital authorized by the General Assembly at the session of 1894, has continued to crowd the hospital beyond its normal capacity. In spite of additional accommodations made by fitting up the bowling alley as a ward for colored women, applications for admission must be declined almost daily for want of room.

During the year a new mortuary room has been fitted up, and the bowling alley, as above stated, has been converted into a ward for patients. The parking of the wooded portion of the grounds, and the regrading and widening of the roads, has been continued. Nearly all of this work has been done by the regular employes and the patients.

The percentage of recoveries on the total number under treatment during the year was 6.6 per cent; on the total admissions 38.8 per cent, and on the number of cases where the disease had existed less than one year before admission, 81.3 per cent.

These figures agree substantially with those given in last year's report.

The large recovery rate on the cases admitted soon after the outbreak of the disease emphasizes the great importance of early treatment in insanity, as in other diseases.

Twenty-six patients (twelve males and fourteen females) died during the year, a mortality rate of 4.68 per cent on the total number in the hospital during the year, and of 5.52 per cent on the daily average population. This death-rate is, I believe, the lowest recorded since the foundation of the hospital, and is exceptional among institutions for the insane throughout the world. This gratifying result is, in large measure, due to the careful and painstaking attention of the medical staff.

In the last annual report I referred to the diminished death-rate from pulmonary consumption in the hospital, and expressed the hope that a further decrease might be recorded during the current year. By the exercise of constant vigilance in limiting opportunities for infection, this result has been attained. In table 17, the deaths from consumption (phthisis) are set down as six, most of them being verified by post-mortem examination. This would give a rate of 23.1 per cent of the total deaths as due to this disease, a slight decrease from last year. If, however, we exclude, as I think we properly may, one case that came to the hospital with advanced tuberculosis of the throat and lungs, our tubercular death-rate for the year is reduced to 19.2 per cent, which is probably the lowest ever reached in an institution of this character.

[In connection with the death-rate we may add: We think Dr. Pliny Earle has reported a lower death-rate, and the Illinois Eastern Hospital for the Insane at Kankakee, in its report for two years ending June 30, 1890, gives the death-rate on the average number present as 5.3, and on the whole number present, 3.1. The death-rates of different hospitals would make an interesting comparative study.—ED. JOURNAL.]

—Dr. Gundry of Harlem Lodge, Catonsville, writes of a very busy year, and says that he now has thirty patients under his care. During the past twelve months he has tried the cottage plan with such good results that he is now erecting another building containing three rooms and a bath.

MASSACHUSETTS.—Dr. W. L. Worcester has been engaged as pathologist to the Danvers Hospital, and Dr. Adolf Meyer, formerly of Kankakee, as pathologist to the Worcester Hospital.

MICHIGAN.—*Michigan Asylum for the Insane*.—George F. Inch, M. D., of Oak Pointe, New Brunswick, and E. H. Robertson, M. D., of Ogden, Mich., both graduates of the Michigan University, of the Class of 1895, have been appointed internes in the asylum for a period of one year, dating from October 1, 1895. With this addition to the medical force more time is allowed for special work in bacteriology, microscopy, and other directions. The medical staff meets daily at a stated hour and all new patients, so far as possible, are brought before the staff for an examination.

Six men and eight women have finished the two courses prescribed in the Asylum Training School, and have been granted certificates of proficiency by the board of trustees, and graduated as the Class of 1895. The training school is again in session and is more largely attended than during any previous year. There is an earnestness and enthusiasm in the classes, both junior and senior, that portend good results. An expert woman teacher of massage and mechanical movements has been engaged and is giving a course of sixteen lectures to the senior students in this special branch. These lectures are each accompanied by practical demonstrations in the asylum hospital.

The new system of water supply from an elevated tank in the water tower has been in use for some time, and is satisfactory. The tank is sufficiently elevated so that a static head for fire purposes is obtained, and, with a reserve of 250,000 gallons and water mains around the buildings with frequent hydrants, there is better outside protection against fire than has ever been had heretofore at this institution.

With the construction of a central heating and power plant, buildings in the rear of both the male and female departments, formerly used as boiler houses, were vacated. The one at the male department has been converted into a common dining hall, and into rooms for engineers, teamsters, and other employes. A tile floor has been laid in the dining room and it has been fitted up in an attractive manner. One hundred and sixty-five patients take their meals there, and as it is immediately in the rear of the kitchen at the department for men, the advantage of serving food hot from the kitchen is obtained. The ward dining rooms vacated by this change have been fitted into dormitories and additional room made for twenty-five more patients.

The building at the female department for the kitchen and laundry employes has lately been added to and remodeled.

Plans have been drawn for a detached building for men. This building is intended for the paralyzed, feeble, helpless, and untidy patients, and is mainly a one-story structure, consisting of a large day room, dining room, solarium, and dormitories, with all the necessary accessories. A part is to be two stories in height, the upper portion containing rooms for night nurses and other employes. Owing to the condition of the patients who are to occupy the building, special attention has been paid to securing very free ventilation. Patients will not be obliged to ascend stairways to reach sleeping apartments, and special facilities are provided for bathing and night service. Work will be begun on this building as soon as the weather will permit in the spring.

—The Association of Asylum Assistant Physicians met at Kalamazoo on October 24th. A report of its transactions appears elsewhere in this JOURNAL.

NEW HAMPSHIRE.—*New Hampshire Asylum, Concord.*—An attempt was made to induce the Legislature to make an appropriation for an additional group of buildings intended wholly for the use of the chronic and incurable classes. Unfortunately the bill did not pass, although the number of patients was never larger than at present. The institution, with the new building recently erected, has accommodations for 350, and as there have been 419 in the hospital at one time, the hospital is suffering somewhat from overcrowding.

During the past fall the new house for convalescents, known as the "Twitchell House," was opened and occupied by nineteen male patients. The building has a capacity for from twenty-five to thirty patients. It is connected with the main building by a subway made of brick and stone. Through this subway pass all the hot water, cold water, and steam for warming the building. The addition proves to be very sunny, and admirably fulfills the intention for which it was constructed. The rear portion is entirely distinct from the anterior part, thereby furnishing additional means for classification among the acute and more appreciative patients. This building is placed in charge of a man and his wife.

The trustees at their recent annual meeting decided to erect a farm cottage on the summer estate at Lake Penacook, four miles distant from the asylum. This building will be occupied by a family of working men. The Walker summer cottage has been opened as usual the past year with great benefit to many patients.

NEW YORK.—*Binghamton State Hospital.*—Dr. Arthur M. Collier, who had acted as second assistant physician in this hospital, resigned and has accepted a position as first assistant physician in the St. Lawrence State Hospital. Dr. Warren L. Babcock, who had served as a medical interne, also resigned and accepted a position as an assistant physician on the staff of the St. Lawrence State Hospital. To fill the vacancy caused by Dr. Collier's resignation, Drs. Wm. A. White, L. W. Dodson, Arthur P. Summers, and Robert G. Wal-

lace have been promoted one grade. Dr. Arthur P. Shellman, who had served two years on the house staff of Charity Hospital, New York City, has been appointed a medical interne.

The training school for nurses is again open and much hard work in this line is being done by the physicians and attendants.

The work of converting the lower ward of the north wing of the main building into a dining room is about completed. The room is bright, handsomely finished in quartered oak, and a plain but very neat steel ceiling. The greenhouse has been completed and the old one has been moved to a point near the bakery building. The new mortuary is also nearly finished, as are also the alterations to the north and east buildings. The plans and specifications for the recreation building, and also for the plumbing work in the main building, have been prepared and bids for doing the work have been asked for. The apartments in the bakery building have been substantially furnished and are now occupied, thus lessening the crowded condition of the wards.

A large number of trees and shrubs have been planted and the grounds beautified by grading and the making of lawns. The ball ground has been graded and seeded and is now the pride of all the hospital. The driveways have been worked and many of them macadamized. A new walk has been made from the main building to the south and west buildings, and a high picket fence has been erected along the entire southern side of the hospital premises.

— *Buffalo State Hospital.*— The past year has witnessed the completion of the Buffalo State Hospital in accordance with the original plans made over twenty years ago. Within the year four new buildings, comprising eight new wards, have been completed and occupied by patients, making the capacity of the institution now 1,000.

The new wards are provided with more dormitory space, proportionately, than the older wards; are provided with sunny piazzas and spray baths, and are convenient of management and administration, and also accommodate a large number of patients. The forced blast system of heating is in operation and its workings have been examined by many visitors from this and other States interested in the heating of large buildings.

Dr. Herman G. Matzinger, for eight years a member of the staff, has resigned his position and has entered upon the regular practice of his profession in the city of Buffalo.

Dr. Walter H. Kidder, for two years medical interne, resigned in September, 1895, to accept a position on the staff of the St. Lawrence State Hospital. His place has been filled by Dr. Eugene H. Goodfellow of Gloversville, N. Y.

The position of second assistant physician, made vacant by the resignation of Dr. Matzinger, has been filled by Dr. George G. Armstrong, formerly third assistant physician in this hospital. Dr. Walter H. Conley, formerly fourth assistant physician, was appointed to the position of third assistant.

Dr. Joseph B. Betts of Cropseyville, N. Y., has also been added to the corps of assistant physicians.

— *Willard State Hospital.*— An additional assistant physician has been appointed, and the first assistant, being relieved of the detailed charge of

certain wards, the care of which has heretofore occupied practically all of his time, is assigned the duty of exercising a general supervision over the entire medical service. This change in the plan of administration is expected to prove beneficial by securing uniformity of method in the management of the widely separated departments of the hospital, and we hope that it will at the same time create a greater interest in the strictly medical work.

The rebuilding of the departments destroyed by fire last spring has occupied the summer and autumn, to the practical exclusion of all other important structural undertakings. Eight hundred feet of heavy cast-iron suction pipe was, however, laid in the lake to replace a steel riveted pipe put in three years ago, which proved too light to withstand the waves and strong currents encountered during the winter.

Following the lead of Dr. Bruce in the Royal Edinburgh Asylum, and Dr. Clarke of Kingston, we have been testing the efficacy of thyroid feeding in a number of cases of insanity. The results obtained so far have not been very marked, but there has not been a sufficient trial of the treatment to warrant any definite conclusions. A full report may appear later in the *State Hospital Bulletin*.

—*St. Lawrence State Hospital*.—The recreation building has been started and is nearly inclosed. The employes' building has been completed and is now being occupied. This building accommodates 134 attendants in an admirable manner. With the occupancy of this building there will be no attendant or employe sleeping on the wards. The fire department building is inclosed and will soon be completed. Accommodations are therein provided for all the fire apparatus, stabling for two horses, and living room for two men. In case of fire the hose can be taken to the fire, where hosemen can report, thus saving several minutes in time. The trolley electric road to the hospital is now in operation. This road is fenced in upon the hospital grounds, and the only exit is through a "station," where supervision of visitors can be had.

NORTH CAROLINA.—*The Eastern Hospital, Goldsboro*.—A building designed as an addition to the Eastern Hospital is nearing completion. It is four stories high, 107 x 48 x 47, contains a large dining room and accommodations for ninety-two patients.

An eight-inch well, 570 feet deep, for drinking and other purposes, has recently been bored.

OHIO.—Dr. A. B. Richardson writes there is nothing of much consequence to record in Ohio. The numbers of the insane are increasing in all the institutions in this part of the country, forcing the State to provide accommodations for about 6,000. The institution at Cleveland is particularly crowded, having 129 beyond its capacity, and returning to the county infirmaries or declining during the past year at least 175. An appropriation of \$300,000 is asked of the Legislature to complete the Massillon State Hospital to an extent sufficient to accommodate 500 patients. With this amount it can be prepared for occupancy in the year 1897. There have been no changes of consequence in the official staff of any of the State institutions during the past six months.

—*Athens State Hospital.*—Two new plants, one for ice and the other for electric lights, have been added to this institution during the past few months.

PENNSYLVANIA.—A charter has been granted for the "Pennsylvania Colony Farm for Epileptics." Dr. Wharton Sinkler is president of the Board of Directors, Dr. C. K. Mills and Dr. James C. Wilson are among the directors. Fifty thousand dollars has been offered by a charitable gentleman, provided a farm is secured before January 1, 1896.

—*State Hospital for the Insane, Warren.*—A new building, designed as a gymnasium, and containing Turkish baths for women, has recently been opened in this asylum. It has rooms also where massage is given, and another apartment where molding or modeling in clay will be taught. In the second story is a large room, to be used as a reading-room and museum, and almost a sun-room, as it contains windows on all sides. A porch extends across the building.

Dr. Curwen writes that he is trying to individualize the treatment to a greater extent than heretofore, and finds his new method very beneficial to the patients.

TEXAS.—*Southwestern Insane Asylum, San Antonio.*—Dr. T. T. Jackson has been appointed assistant superintendent of this asylum, *vice* Dr. T. C. Karnes, who resigned on account of physical disability, caused by a gunshot wound received while hunting.

VIRGINIA.—*Western State Hospital, Staunton.*—A new laundry, equipped with all modern machinery, has recently been completed at a cost of \$10,000. Its capacity is sufficient for a population of 1,500 persons. It is contained in a handsome structure, has a granolithic floor, large and modern drying room, is well ventilated, and considered to be the best laundry in the State.

It is contemplated in the near future to tear down the old laundry building and carpenter shop and to erect a large associated dining room, and then to convert the present ward dining rooms into wards, which will add several hundred or more to the present capacity (857 beds) of the hospital.

—*Southwestern State Hospital, Marion.*—An addition to this hospital is about completed, which is three stories high with basement, and is attached to the west wing. The building is 54 x 134, each floor containing seventeen single rooms, three large ward rooms, with twelve-foot hall and a large dining room, and is connected with annex, 16 x 20, containing bathroom and water closet. Metal ceilings are used throughout the building and cement plaster covers the walls. There are solid brick walls between all rooms. An underground corridor, sixty feet long, connects this addition with the main building. Capacity about 120; cost of construction, exclusive of patient labor, \$12,500.

When furnished next summer, this addition will relieve the overcrowded wards and accommodate a portion of the unprovided for (113).

WASHINGTON.—*Western Washington Hospital for the Insane, Fort Steilacoom.*—Dr. Waughop writes: "Since our last report we have adopted uniforms for both officers and attendants and are pleased with the change.

"We are laying the foundation for future scientific work. We have a good many pathological specimens in our incipient laboratory. Post mortems are held, and have been all along, as frequently as possible, and a better autopsy room has been fitted up. Post mortem records are kept in each case in a bound volume of autopsy sheets. Twenty-six post mortems were held during the past year. We have purchased an excellent Leitz microscope with quite complete accessories, including an oil immersing lens and a Minot microtome for making sections. We have also purchased a fifty-cell battery—the 'McIntosh Complete Wall Plate with DeWatterville's Combiner in Wall Case,' with rheodal and milliamperemeter.

"We are also considering the advisability of beginning a training school for nurses.

"Our present population is 521—378 males and 143 females. Our usual proportion is three-fourths male and one-fourth female."

WISCONSIN.—The State institutions of Wisconsin have undergone a change in their official staff under the change in political complexion of the State government. We have not heard complaints that the changes made were for the worse, but if in any case good and worthy servants of the State have been displaced for political reasons, the step is to be condemned, whether taken by one or the other political party. Dr. Wm. Lyman is the newly appointed head of the State Hospital at Madison (Mendota), and Dr. W. Gordon at Oshkosh. We hear these officials well-spoken of in impartial quarters as able and of good professional standing.

The building of county asylums under the "Semi-State" care plan goes on apace; many very good and costly are being constructed. If in time proper medical administration is provided for them and their control is made free from what we may call "party and penury" taint, they may do good work. The Milwaukee Sanitarium at Wauwatosa, a suburb of Milwaukee, under the medical charge of Dr. Richard Dewey, is undergoing extension, a new dormitory building for nurses and employes being about ready to occupy.

OBITUARY.

E. EVARISTE DUQUET, M. D.

Dr. Emmanuel Evariste Duquet was born in Ste. Philomene, Chateauguay County, Quebec, April 3, 1855, his father being Francis Duquet, farmer, of that place.

His early education was received at Beauhamois College, where he spent three years under the tuition of the Christian Brothers. At the age of thirteen he was taken from college to assist his father on the farm, but with a natural aptitude for study, whetted by his brief residence at school, his every spare moment was devoted to augmenting his literary knowledge. His parents dying when he was but sixteen years of age, he was thrown on his own resources. Quitting a farming life, for which he had no taste, he went to Montreal, fully determined to carve out for himself a professional career. At the age of twenty he entered on the study of medicine, and received his degree therein from Victoria College, Montreal, in April, 1879. Immediately after graduation he started as a general practitioner at Longue Pointe, one of the suburbs of Montreal, and soon became well and favorably known as an exemplary citizen and capable physician.

In 1885 Dr. Duquet was nominated assistant physician to the St. Jean de Dieu Asylum, better known as the Longue Pointe Asylum, and from that time forward he devoted himself entirely to the study of mental diseases. His opportunity for observation and study was improved to the utmost, and in 1887, upon the death of Dr. Hovard, medical superintendent of the institution, he was appointed by the Provincial Government to the vacancy thus created, a position he efficiently held up to the date of his premature death.

In spite of a naturally delicate constitution, Dr. Duquet never spared himself in his untiring efforts to improve the condition of his unfortunate charges, who, at the time of his demise, numbered no less than 1,300. The severe strain from the increasing mental and physical labor connected with so large an institution gradually undermined his health, and rendered him unable to combat an attack of pneumonia, with which he was seized, and to which he succumbed after an illness of only eight days' duration. The end came on the evening of Wednesday, December 19, 1894, long

before the age which men count fit, he being only in his fortieth year. A two-score years of greater usefulness it would be difficult to find.

The subject of the classification of mental disorders was ever a favorite one with Dr. Duquet, and his remarks thereon in the psychological section of the medical congress, held at Philadelphia in 1887, were most favorably commented upon by all who heard them.

During the summer of 1889 Dr. Duquet made an extended tour in Europe, visiting many of the principal asylums. He also attended the International Congress on Mental Diseases, held at Paris in August of that year, where his observations on "Legislation Concerning Insane Asylums in the Province of Quebec" were listened to with marked attention. These observations, together with an able paper from his facile pen, entitled "Notes sur un Cas de Folie Simalée," were published in the report of proceedings by the general secretary for the congress, Dr. Antonie Ritti. The favorable impression here made upon his European confrères was testified to by his election, in November, 1889, as an associate member of the Medico-Psychological Society of Paris. In 1890 a similar honor was conferred upon him by the "Société de Médecine Mentale" of Belgium.

The following letter in connection with his election to the former society speaks eloquently of the regard Dr. Duquet had won for himself:

PARIS, November 28, 1889.

DEAR SIR AND CONFRÈRE: I have the honor to inform you that the Medico-Psychological Society of Paris, taking into consideration the conclusions of my report on the work of the International Congress on Mental Diseases, unanimously elected you an associate member.

I am delighted at this decision, as it brings to our society a colleague whose work it justly holds in high esteem. I interpret its sentiments in assuring you of our cordial congratulations.

Accept, dear sir, again my hearty good wishes.

THE GENERAL SECRETARY,

ANTONIE RITTI,

State Asylum of Charenton.

Dr. Duquet was a man of fine presence, and of fluent delivery in either French or English. He was a cheerful, generous, warm-hearted friend, possessed of broad sympathies; a well-read physician of wide and varied culture. Though a devout Roman Catholic, he was devoid of any sectarian narrowness, but, instead, full

of a large and charitable spirit to all mankind; firm in his support of what he deemed right, but tolerant of all honest difference of opinion. In short, he belonged to the highest type of asylum superintendent.

Dr. Duquet was married, in 1884, to Rose A., daughter of Mr. Edward Quinn of Longue Pointe, a union which was a source of great happiness to both. Three children were born of the marriage, who, with Mrs. Duquet, survive him.

At the meeting of the Montreal Medico-Chirological Society, held January 25, 1895, Dr. W. H. Hingston, in moving (seconded by Dr. T. J. W. Burgess) that the society record its sense of the great loss it had sustained by the death of Dr. Duquet, added the following justly merited tribute:

"Dr. Duquet's was one of those quiet, reserved, retiring dispositions, which secured for him the respect and esteem of his professional brethren."

His appearance was that of a gentleman; his manner was dignified, and gave one the impression of great reserve power.

The members of the society present at the congress at Philadelphia, in 1887, will remember the favorable impression created in the section on psychological medicine by the calm, clear, judicial manner in which he submitted his views on a new classification of mental diseases. I was present at that meeting, although not in that section, and several of the distinguished alienists informed me of their warm appreciation of the able manner in which he laid down his views, and the clearness and lucidity of his method.

Toward his professional brethren he was delicately honorable, and his death, at so early an age, was a matter of universal regret.

T. J. W. BURGESS.

ITEMS.

THE officers at Fort Sheridan, United States military post, have had an investigation of a scandal, in which "post alcoholic insanity" served as a plea in extenuation of an assault. "Post alcoholism," as one of the counsel termed it, is a plea not creditable to the officer or the army.

THE City Insane Asylum of New York is again opened for clinical teaching. All the medical schools have the privilege of clinical demonstration of cases of insanity.

THE Rush monument fund now amounts to \$3,548.39.

GOVERNOR MORTON is in favor of State care for the city insane. A bill to that effect has been introduced.

SO MUCH trouble has arisen over the Hannigan, Aub, and other cases in New York that an effort is being made to change the method of gaining expert testimony.

By a decision of the Court of Appeals, New York must pay into the State treasury \$1,500,000, the balance of the tax, with two years' interest, for State care of insane.

THE able and esteemed *Medical News* has been moved from Philadelphia to New York, and Dr. J. Riddle Goffe has become its editor.

THE Medical Society of Berne has inaugurated a plan for the suppression of press notices of suicides.

PROGRESS and professional ability in the neurological specialty are shown by the Kansas City profession, as illustrated by bringing Dr. Sachs from New York to read a paper before the Academy of Medicine, as well as by Dr. Sachs' expression of praise of the high level of professional attainment shown by the profession of Kansas City.

We are indebted for our knowledge of the above to *Langsdale's Lancet*, a new and very creditable adventure in medical journalism, in which Dr. John Puntton, professor of diseases of the mind and nervous system in the Universal Medical College of Kansas City, conducts a department of neurology and psychiatry, which promises to be interesting and profitable to the readers of the *Lancet*.

DR. WM. F. DREWRY of the Central State Hospital, Petersburg, Va., read, at the last meeting of the State Medical Society, a paper on "State Provision for Epileptics." After the reading of the paper the State Society passed a resolution urging provision for epileptics by the State, and appointed a committee, consisting of Dr. R. J. Preston (president) and Dr. Drewry, to present the matter to the State Legislature.

THE authorities of the Craig Colony for Epileptics give notice to the superintendents of the poor of New York that they will soon be ready for a limited number of patients.

EVEN in Boston there is the usual difference between State and municipal care of the insane. The city has allowed \$2.75 per week, the State \$3.55, but as the city authorities anticipate the State will soon take over the burden, they have allowed \$3.55 for three months.

DR. J. M. MOSHER and Dr. Robert Cook of the St. Lawrence State Hospital, previous to their recent departure for Europe, were given a complimentary dinner by the Ogdensburg Medical Society. This journal, which has had their valuable services, tenders them congratulations and best wishes. They are sure to be greatly missed at the State Hospital, but will no doubt render services to the profession increased in value by their foreign sojourn.

ACCORDING to the *Journal of the American Medical Association*, Dr. J. H. Letcher of Henderson, a prominent Republican, is mentioned as the choice of Governor Bradley for superintendent of the Hopkinsville Asylum, and Dr. I. N. Baughman of Flat Lick for superintendent of the Eastern Asylum at Lexington. Dr. Baughman has held public office before, having been pension examiner under the last Republican President.

THE Iowa hospitals for the insane at Clarinda and Independence each publish a neat monthly paper. That of the Clarinda institution, *The Hospital News*, is before us; its title indicates its scope. It seems to be a very creditable issue.

THE INFLUENCE OF MIND.—Great brain and nerve strain, as in insanity, brittles the bones; grief and fright blanches the face and hair; fear paralyzes the heart, depresses temperature, causes excessive and clammy perspiration; anxiety arrests secretion and shrivels the skin; remorse wastes away the body; anger flushes the face and so fills the brain with blood that its vessels burst and the victims fall with apoplexy; shame flushes the cheek, slows the heart and respiration; sorrow shows itself in tears; love and good fortune brighten the countenance and quicken the step and pulse and lift up the form; while adversity and remorse sadden the face, slow the pulse, bend the form, and depress the bodily movements. These things, and many needless to mention, show us the potency of mental influence, through its proper neural channels, on the movements of the organism. We can not deny them in regard to the stomach. On the contrary, as we see the systole of the heart arrested by emotion, so we see digestion stayed by disagreeable and depressing thought. Mental force, through psychoneural media, pervades the body, and the stomach is not exempt from its invigorating or depressing influence over its physiologic functions.—*Dr. C. H. Hughes.*

It seems, from a complaint in the *Medical Press*, that the lunatic wards in English poor law institutions are sometimes made places for disciplining the sane inmates, disobedience or disorder being punished by a transfer to among the lunatics. The *Medical Press* asks the local government boards to investigate this alleged abuse.

DRS. VICTOR HORSLEY AND BEEVOR have reported two cases of relief of athetosis by trephining and excision of cortex. But in both the patient died from brain complication within a year or two.

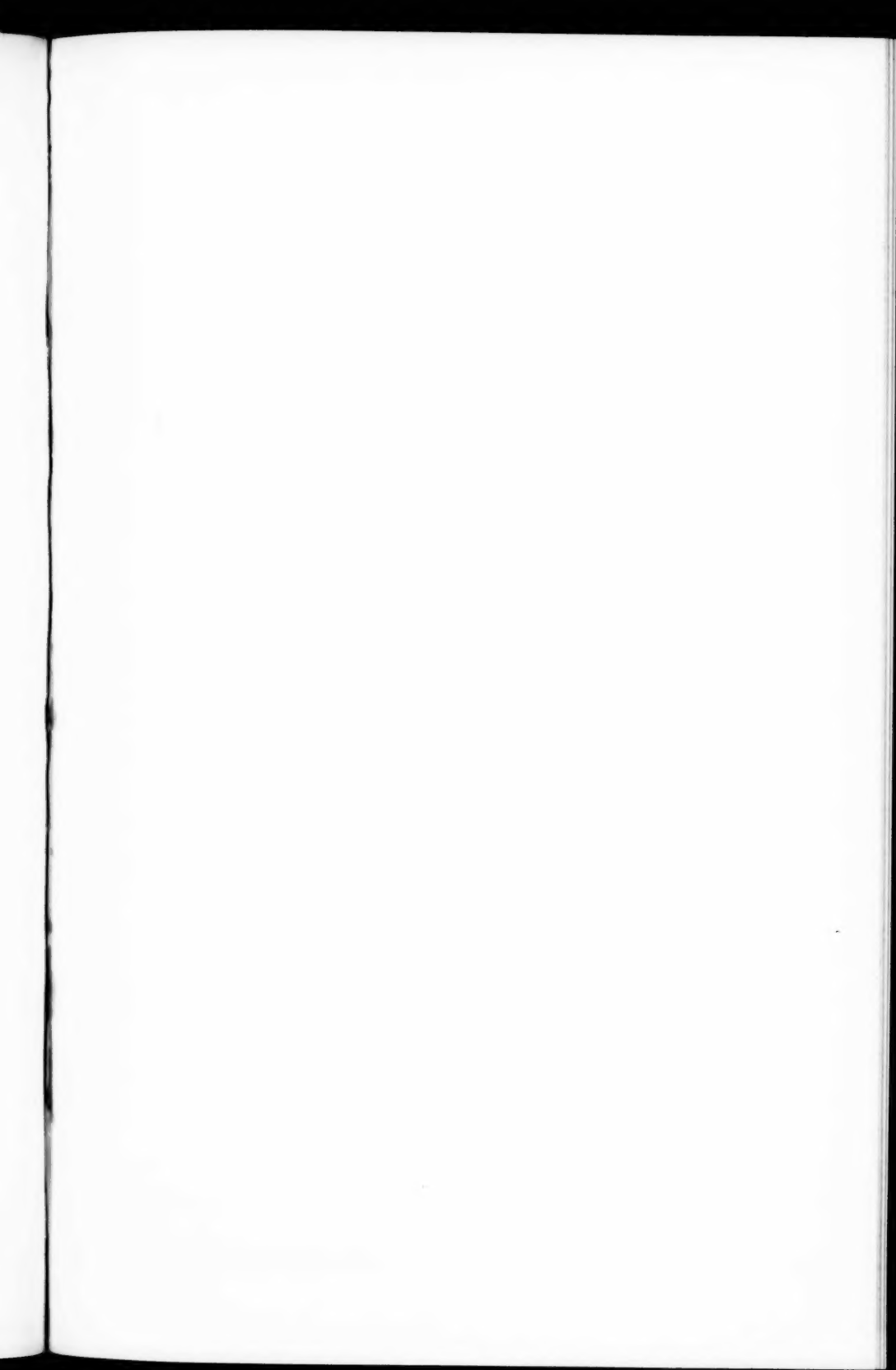
ACCORDING to the *Kansas Medical Journal* it is possible in that State to try an individual for insanity by jury trial, in his absence and without his knowledge, and it calls attention to this weak point in their insanity laws. This would seem to be the *reductio ad absurdum* of the jury trial for insanity.

APPOINTMENTS, RESIGNATIONS, ETC.

- APPLEGATE, DR. CHARLES F.**, promoted from Third to First Assistant Physician at the Iowa Hospital for the Insane, Clarinda.
- BARCOCK, DR. W. L.**, appointed Assistant Physician at the St. Lawrence State Hospital, Ogdensburg, N. Y.
- BARRETT, DR. ALBERT M.**, appointed Third Assistant Physician at the Iowa Hospital for Insane, Independence.
- BETTS, DR. JOSEPH B.**, appointed Assistant Physician at the Buffalo State Hospital, Buffalo, N. Y.
- BOODY, DR. GEORGE**, resigned as Assistant Physician from the Illinois Eastern Hospital at Kankakee.
- BOODY, DR. GEORGE**, appointed Second Assistant Physician at the Iowa Hospital for the Insane, Independence.
- BURNET, DR. ANNE**, appointed Second Assistant Physician at the Iowa Hospital for Insane, Clarinda.
- COLLIER, DR. A. M.**, resigned as Second Assistant Physician at the Binghamton State Hospital, Binghamton, N. Y.
- COLLIER, DR. A. M.**, appointed First Assistant Physician at the St. Lawrence State Hospital, Ogdensburg, N. Y.
- DOOLITTLE, DR. JOHN C.**, promoted to First Assistant at the Iowa Hospital for the Insane, Independence.
- DREW, DR. C. A.**, resigned as First Assistant Physician at the Iowa Hospital for the Insane, Clarinda.
- GOODFELLOW, DR. EUGENE H.**, appointed Interne at the Buffalo State Hospital, Buffalo, N. Y.
- GUNDRY, DR. A. T.**, appointed Third Assistant Physician at the Iowa Hospital for Insane, Clarinda.
- INCH, DR. GEORGE F.**, appointed Interne at the Michigan Asylum for the Insane, Kalamazoo.
- JACKSON, DR. T. T.**, appointed Assistant Superintendent at the Southwestern Insane Hospital, San Antonio, Texas.
- KARNES, DR. T. C.**, resigned as Assistant Superintendent at the Southwestern Insane Asylum, San Antonio, Texas.
- KELLOGG, DR. T. H.**, resigned as Superintendent at the Willard State Hospital, Willard, N. Y.
- KIDDER, DR. WALTER H.**, appointed Assistant Physician at the St. Lawrence State Hospital, Ogdensburg, N. Y.
- MABON, DR. W.**, appointed Superintendent at the Willard State Hospital, Willard, N. Y.
- MACKIN, DR. M. C.**, appointed Fourth Assistant Physician at the Iowa Hospital for Insane, Independence.
- MARKHAM, DR. H. E.**, resigned as Second Assistant Physician at the Iowa Hospital for Insane, Clarinda.
- MATZINGER, DR. H. G.**, resigned as Assistant Physician at the Buffalo State Hospital, Buffalo, N. Y.
- MATZINGER, DR. H. G.**, appointed on staff at the St. Lawrence State Hospital, Ogdensburg, N. Y.
- MEYER, DR. ADOLF**, resigned as Pathologist at the Illinois Eastern Hospital for Insane, Kankakee.
- MEYER, DR. ADOLF**, appointed Pathologist at the Worcester Hospital for Insane, Worcester, Mass.
- ROBERTSON, DR. E. H.**, appointed Interne at the Michigan Asylum for the Insane, Kalamazoo.
- VOLDENG, DR. M. NELSON**, resigned as First Assistant Physician at the Iowa Hospital for the Insane, Independence.
- WELLS, DR. J. W.**, resigned as Third Assistant Physician at the Iowa Hospital for the Insane, Independence.
- WORCESTER, DR. W. L.**, appointed Pathologist at Danvers State Hospital, Danvers, Mass.

BOOKS, ETC., RECEIVED.

- Clinical Lectures on Diseases of the Nervous System.* Delivered at the National Hospital for the Paralyzed and Epileptics, London. By W. R. GOWERS, M. D., F. R. S. Philadelphia: P. Blakeston, Son & Co., 1895.
- A History of the Chronic Degenerative Diseases of the Central Nervous System.* By THOMAS KIRKPATRICK MONRO, M. A., M. D. Glasgow: Alex Macdougall, 1895.
- Pregnancy, Labor, and the Puerperal State.* By EGBERT H. GRANDIN, M. D., Consulting Obstetric Surgeon to the New York Maternity Hospital, etc., and GEORGE W. JARMAN, M. D., Obstetric Surgeon to the New York Maternity Hospital, Gynecologist to the Cancer Hospital. Philadelphia: F. A. Davis & Co., 1895.
- De una Nuova Forma di Nevrosi Parziale (Anagnosiastenìa).* Pel PROF. L. BIANCHI. Estratta degli Annali di Nevrologia, XIII, p. 1. Naples, 1895.
- PROF. LEONARDO DR. BIANCHI. Validità Contestata del Testamento di un Suicida. Perizia psichiatria. Estratta del Giornale di "Medicina Legale," II, F. 4. Lanciano, 1895.
- Kriminalanthropologie.* Von DR. G. BUSCHAN in Stettin. Sep. Abdr. aus der Real.-Encyclopedia des gesammten Heilkunde. Bd. V, 1895.
- Bibliographischer Semesterbericht der Erscheinungen aus dem Gebiete Neurologie und Psychiatrie.* Von Dr. Med. u. phil., G. BUSCHAN. Erste Jahrgang, 1895, erste Hälfte, Jena, 1895. Gustav Fischer.
- Max Nordau and His Critics.* By G. FRANK LYDSTON, M. D. (Rep. from *Medicine*, September, 1895.)
- A Case of Moral Insanity.* By ELIOT GORTON, M. D. (Rep. from *JOURNAL*.)
- Hypnotism, with Special Reference to Hypnotic Suggestion as an Aid to the Anesthesia of Chloroform and Ether.* By CHARLES GILBERT DAVIS, M. D. (Rep. from *Jour. of the Amer. Med. Ass'n*, October 5, 1895.)
- A Well-marked Case of Kahlbaum's So-called Katatonia.* By L. W. DOLAN, M. D. (Rep. from *Med. Record*, July 6, 1895.)
- Twelfth Annual Report of the Committee on Lunacy,* to the Board of Public Charities of the Commonwealth of Pennsylvania, for the year ending September 30, 1894.
- Intestinal Obstruction following Operations in which the Peritoneal Cavity is Opened.* The president's address before the American Association of Obstetricians and Gynecologists, at Toronto, September 20, 1894. By GEO. H. ROHE, M. D. (Rep. from *Transactions*.)
- Pelvic Disease in Women and Insanity.* Read at the fifty first meeting of the American Medico-Psychological Association at Denver, Colo., June 13, 1895. (Rep. from *Journal of the Am. Med. Ass'n*, October 12, 1895.)





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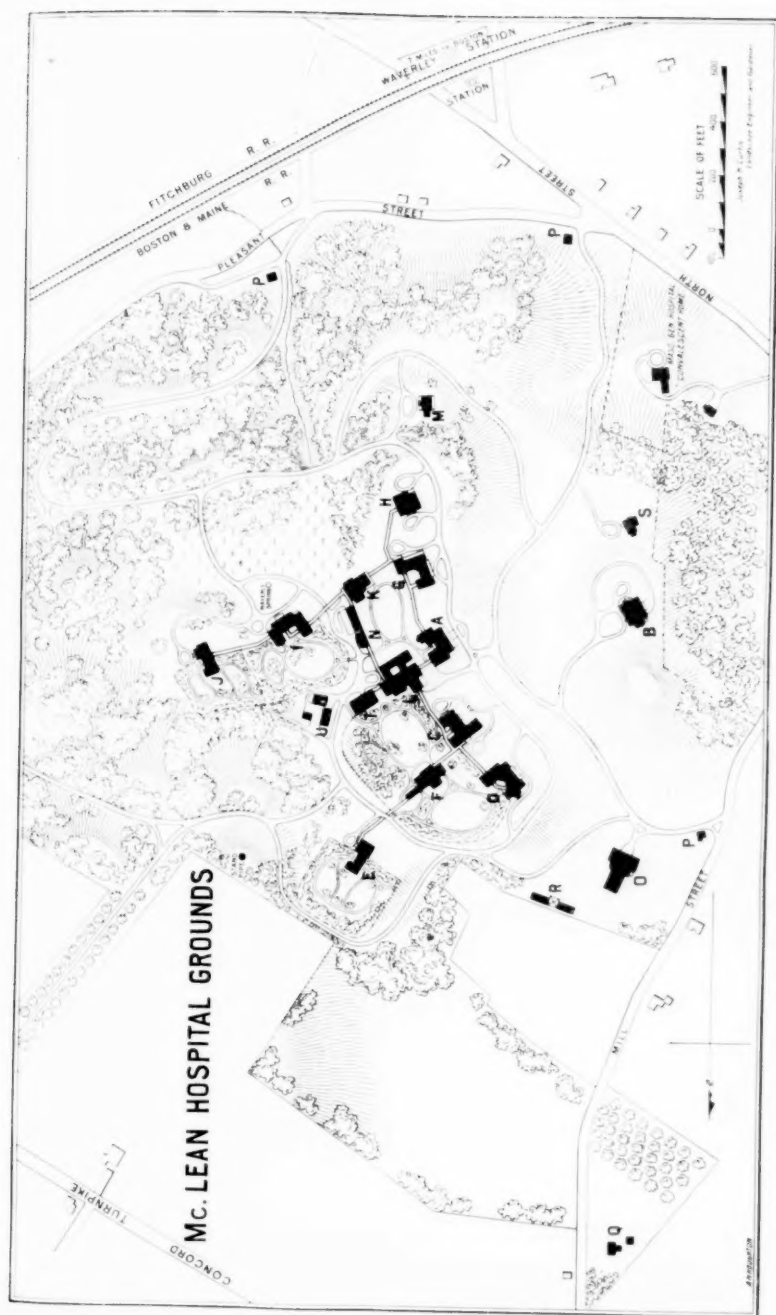
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MCLEAN HOSPITAL.



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